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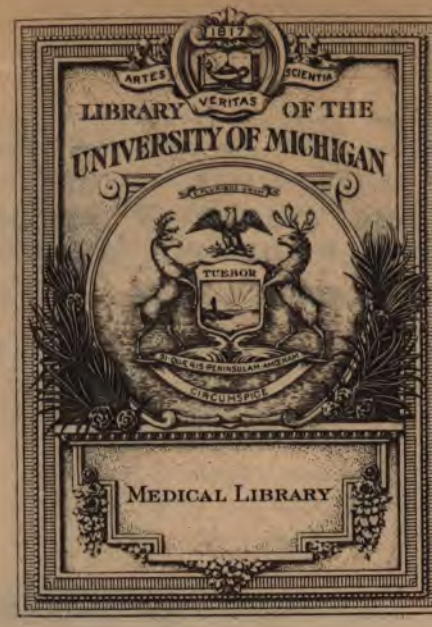
TRANSACTIONS

OF THE

MINNESOTA STATE MEDICAL SOCIETY

[illegible]

ST. PAUL:
[illegible] PRINTING COMPANY
[illegible]



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TRANSACTIONS

— OF THE —

MINNESOTA

State Medical Society

1884.

ST. PAUL:
H. M. SMYTH PRINTING COMPANY.
1884.

Officers of the Society.

PRESIDENT:

J. B. McGAUGHEY, M. D.

FIRST VICE PRESIDENT:

F. A. DUNSMOOR, M. D.

SECOND VICE PRESIDENT:

W. H. PRATT, M. D.

THIRD VICE PRESIDENT:

C. A. WHEATON, M. D.

TREASURER:

S. B. SHEARDOWN, M. D.

RECORDING SECRETARY:

C. H. BOARDMAN, M. D.

CORRESPONDING SECRETARY:

A. F. RITCHIE, M. D.

CENSORS.

FOR THREE YEARS—J. C. RHODES, M. D.
V. SMITH, M. D.

FOR TWO YEARS - R. S. McMURDY, M. D.
A. W. STINCHFIELD, M. D.

FOR ONE YEAR - C. F. McCOMB, M. D.
J. B. McGAUGHEY, M. D.

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PROCEEDINGS

OF THE

SIXTEENTH ANNUAL MEETING

OF THE

MINNESOTA STATE MEDICAL SOCIETY.

The Society met at 10 A. M., Thursday, June 19th, 1884, at the Court House in Stillwater.

The session having been opened with prayer by the Rev. Dr. Carroll, the address of welcome was delivered by Dr. Merrill, of Stillwater.

After the roll-call, the executive committee made a report, and invited the Society to a banquet to be given in the evening at the Sawyer House by the Washington County Society.

Drs. Millard, Dunsmoor, and Leasure were appointed a committee on new members, and recommended for membership those whose names appear in the following list, and who were unanimously elected:

T. J. Hutton, Fergus Falls.....L. I. Coll., 1871
C. A. Stewart, Duluth.....Iowa Univ., 1870
J. C. Adams, Lake City.....Univ. Louisiana
G. A. Hewitt, St. Paul.....Jefferson, 1877
H. H. Wilcox, Albert Lea.....Coll. of Ohio, 1882

R. O. Beard, Minneapolis	Univ. of Chicago, 1881
P. N. Kelly, Rochester	McGill Coll., 1883
W. J. Mayo, Rochester	Ann Arbor, 1884
E. Bennett, Minneapolis	Rush, 1882
J. S. Whetstone, Minneapolis	Ann Arbor
J. E. Moore, Minneapolis	Bellevue, 1873
E. S. Frost, Willmar	Univ. of Penna., 1868
J. B. Dunn, Shakopee	Rush, 1882
Anton Shimonek, St. Paul	
G. M. Coon, Northfield	Rush, 1883
L. T. Pitkin, Stillwater	N. Y. Univ., 1878

Dr. Louis Bauer, of St. Louis, being present, was invited to take part in the proceedings of the Society, and subsequently he, with Dr. John V. Shoemaker, were admitted to honorary membership.

Dr. Leasure introduced the following resolution:

To amend Art. 1, Sec. 2 of the Constitution, by substituting Thursday for Tuesday; and that when any unforeseen event may make it desirable to change the date of meeting, the President may, on the recommendation of a majority of the Board of Censors, change the said time of meeting, but keeping within the month of June, and he shall direct the Corresponding Secretary to give timely notice of the same by addressing a note or postal card to each member of the Society.

Dr. Stone moved to amend by substituting the words Executive Committee for Board of Censors; and the resolution, as amended, was unanimously adopted.

A communication was received from the Nebraska State Medical Society, as follows:

At the sixteenth annual session of the Nebraska State Medical Society, the following resolutions were adopted and are hereby brought to your notice, with the hope that you will concur with us in the belief that the adoption by yourselves of the same will aid the establishment of such fraternal relations as must prove of inestimable value to all parties:

"The Committee on Foreign Correspondence shall consist of one duly accredited representative (a member of this Society,) for each State or Territorial Medical Society. They shall receive and review the transactions of the Societies which they represent, and through their chairman, the corresponding secretary, present annually a report of

the advances in medicine made by said Societies. They shall also report such other matters as their Societies may wish to communicate to the Nebraska State Medical Society.

"It shall be the duty of the representative of any foreign Society to communicate all advances in matters medical and governmental made by said Society in the year just past, as well as all matters of whatever kind his Society may wish to be brought to the notice of the Nebraska State Medical Society, to the corresponding secretary of the Society, as chairman of the committee. And, finally, the representative shall guard to the best of his ability the interests of his Society, where and whensoever it is demanded.

"Representatives shall hold their credentials, duly signed by the president and secretary of the Society to whom they stand accredited; which credentials shall be forfeited whenever the representative fails to comply with the requirements of his office."

To the president and members of the Minnesota State Medical Society, in care of the Secretary:

GENTLEMEN:—You are respectfully informed that George B. Ayres, M. D., of Omaha, Nebraska, was appointed your legal representative in the Nebraska State Medical Society. Please present to him such credentials as will enable him to attest your approval of the choice made in your behalf.

F. G. FULLER, President.
A. S. MANSFELD, Secretary.

The communication was referred to a committee, Drs. Davenport, McGaughey, and Phillips, upon whose recommendation Dr. Geo. B. Ayers was recognized as the representative of the Minnesota Society, and Dr. Blackmer, of Albert Lea, was appointed to represent the State Society of Nebraska.

The president, Dr. Lincoln, delivered the annual address, which was mainly an appeal to the members of the Society to engage actively in the promulgation of the doctrines of hygiene and of preventive medicine, and to study carefully the relations between inebriety and heredity, with a view to the accumulation of reliable information upon this important subject.

The address was ordered to be printed.

The Society adjourned until 2 P. M.

.....Univ. of Chicago, 18[illegible]
.....McGill Coll., 18[illegible]
.....Ann Arbor, 18[illegible]
.....Rush, 18[illegible]
.....Ann Arbo[illegible]
.....Bellevue, 187[illegible]
.....Univ. of Penna., 18[illegible]
.....Rush, 18[illegible]
.....
.....Rush, 18[illegible]
.....N. Y. Univ., 187[illegible]

[illegible] being present, was [illegible] of the Society, [illegible] Shoemaker, were [illegible]

[illegible] following resolution: [illegible] constitution, by substi[illegible] that when any unfore[illegible] change the date of m[illegible] recommendation [illegible] change the said tim[illegible] month of June, and [illegible] Secretary to give tim[illegible] [illegible] note or postal card [illegible]

[illegible] by substituting the wo[illegible] [illegible] and the [illegible] adopted.

[illegible] was received from the Nebraska S[illegible] [illegible] as follows:

[illegible] of the Nebraska State Medical S[illegible]

THURSDAY AFTERNOON.

After the session was opened, Dr. Hunter offered the following resolution which was unanimously adopted:

That at least one month before the next annual meeting, the chairmen of all committees shall advise the corresponding secretary of all papers to be presented, and that the secretary shall cause the titles or subjects of the same to be printed, and a copy to be sent to each member of the society.

In the discussion upon the adoption of this resolution the opinion was expressed by Dr. Staples and others that it would add to the interest and advantage of the meetings of the society if the chairmen of the committees should act as a board to examine and revise all manuscripts intended to be presented, and select such to be read as seemed most interesting and valuable; and that all others be read by title only.

Dr. Leasure presented the following:

Resolved, That a committee of three be appointed to revise the working methods of standing committees, and that they report at the next annual meeting.

The resolution was adopted, and Drs. Leasure, Hunter and Dunsmoor appointed as the committee.

The treasurer presented his report as follows:

S. B. SHEARDOWN,

* In Acct. with Minnesota State Medical Society.

	DR.
To balance in Treasury from 1883, - -	$ 409 12
Initiations and Certificates, - - -	265 00
Annual Dues, 1883, - - - - -	258 00
Delinquent Dues, - - - - -	72 00
	$1,004 12

By Amount Paid H. M. Smyth Printing Co.,		$ [illegible]
" " C. H. Boardman,		[illegible]
" " " "		[illegible]
" " " "		[illegible]
" " H. H. Kimball,		[illegible]
" " Jay Owens,		[illegible]
" " A. W. Abbott,		[illegible]
" " Talbot Jones,		[illegible]
" " J. J. Lemon,		[illegible]
" " W. J. Whipple,		[illegible]
" " Janitor,		[illegible]
" " S. B. Sheardown,		[illegible]
Balance on hand,		[illegible]
		$1,[illegible]

Stillwater, June 20, 1884.

S. B. SHEARDOWN, Treasurer.

The report, on motion, was accepted.

Owing to a misunderstanding the report of the Committee on Practical Medicine was incomplete, and was read by title, with the exception of a paper by Dr. Leasure, descriptive of a case of cough with expectoration of phosphatic pulmonary concretions. The report was referred to the Publication Committee.

The report of the Committee on Medical Education, by Dr. Hand, was read and ordered to be printed.

On motion of Dr. Staples, Dr. Dunn of Shakopee was appointed a delegate to the International Medical Congress at Copenhagen.

In reply to a question as to what had been accomplished by the State Board of Examiners, Dr. Millard stated that he has the addresses of more than two hundred persons practicing medicine who have left the State since the enactment of the law, because of its

requirements. He said that the Board would endeavor to protect the profession and to raise the standard of professional excellence in the State, and asked the Society to aid and countenance them in their efforts.

On motion of Dr. Owens it was

Resolved, That this Society has perfect confidence in the State Medical Examining Board, and that its members be recommended to give it all encouragement and assistance in their power by creating favorable public opinion.

Dr. Hunter presented the report of the Committee on Surgery, an abstract only of which was read.

In connection with this report Dr. Staples described his treatment of hip joint disease by a leather splint, and was followed by Dr. Bauer, of St. Louis, who spoke at length upon morbus coxœ; he denied the diathetic origin of the inflammation, asserting that it is almost invariably due to traumatism; he condemned treatment by extension, and insisted upon absolute rest, immobility, and, when required, tenotomy.

A vote of thanks was tendered to Dr. Bauer for his address.

Herniotomy and the radical cure of hernia, were discussed by Drs. Millard, Hunter, Moore and others.

Dr. Ayres, of Omaha, reported case of wound of the internal carotid artery, jugular vein and seventh nerve by a piece of glass. The common carotid was tied and the wound made by the glass plugged with absorbent cotton and Monsel's solution. The patient recovered with paralysis due to the nerve lesion. It is a point of interest in the case that Dr. Ayres came upon the man in the street just as the injury was inflicted, and tied the artery as the patient lay upon the sidewalk.

Various papers were read in connection with the report of the Committee on Surgery, which, with the report, were referred to the Committee on Publication.

The Society adjourned until Friday at 9.30 A. M.

A handsome entertainment was given to the Society in the evening at the Sawyer House by the Washington County Society, at which Senator Sabin and Judge McCluer were present, with a number of ladies.

The usual feasting was succeeded by the usual toasts, to which fitting responses were made, and the occasion was greatly enjoyed by all who were present.

FRIDAY MORNING.

The first order of business was the reading of the report of the Committee on Obstetrics, by the chairman, Dr. Clark, of Stillwater; it treated of the use of ergot and chloroform in labor, and of the treatment of the puerperal state, with especial reference to irrigation and intra-uterine injections.

Dr. French advised, as a safer than injections and of greater efficacy, the swabbing the uterine cavity with carbolic or boracic acid or iodoform upon cotton.

Dr. Stone upheld the use of injections, and Drs. Dunsmoor and Hunter cited cases, one of them fatal, illustrative of their danger.

Dr. Hunter emphasized the importance of differentiating cellulitis and septic absorption.

Dr. Lincoln cited a case of a puerperal woman, in whom a chill and a temperature of 106° occurred soon after delivery. The circumstances were such that irrigation, and even good nursing were unattainable. Twenty grains of quinia and the same quantity of potassium bromide were given, no other treatment being resorted to, and in a few hours the temperature fell to 100°, and the patient recovered without further trouble. Dr. Lincoln remarked that, had irrigation been practiced, it would have received credit for the favorable result.

After a lively discussion, the report was referred to the Committee on Publication.

Dr. Davis, of St. Paul, read by title the report of the Committee on Nervous Diseases, upon Hysteria, which was referred as usual, together with the report of the Committee on Necrology, by Dr. Staples.

The following communication was read, and, on motion, ordered to be placed on file:

To the honorable members of the Minnesota State Medical Society:

GENTLEMEN:—Inasmuch as the data bearing upon the important subject of Heredity are exceedingly small, and believing that the cause of Temperance may be greatly aided by having classified reports of facts bearing on the subject, we most earnestly and respectfully request that your honorable body will take some measures, either by the appointment of committees or by any other means your wisdom may suggest, to gather information as to the transmitted effects of alcohol upon posterity, and present the same at your next annual meeting.

Respectfully submitted.

MARY S. WHETSTONE, M. D.,
Superintendent Department of Heredity,
W. C. T. U. of Minnesota.

A paper by Dr. Phillips upon Peritonœal Hyperplasia was read by title and referred to the Publication Committee.

After a careful explanation by the Secretary of the State Examining Board of the methods adopted by its members, the Committee on Gynæcology reported through its chairman, Dr. French.

The usual reference was made made of the report, and the Society adjourned until 2 P. M.

FRIDAY AFTERNOON.

The session was opened by the reading of the report of the Committee on Opthalmology, by the chairman, Dr. Fulton, which was supplemented by a paper presented by Dr. Williams.

Dr. Allport urged that all physicians should qualify themselves to recognize and treat certain diseases of the

eye (e. g. iritis), which are often undetected until too late for treatment even by specialists. The report was referred to the Publication Committee.

The annual election of officers being then in order, was held, and resulted is follows:—

President—Dr. J. B. McGaughey, Winona;

First Vice-President—Dr. F. A. Dunsmoor, Minneapolis;

Second Vice-President—Dr. W. H. Pratt, Stillwater;

Third Vice-President—Dr. C. A. Wheaton, St. Panl;

Treasurer—Dr. S. B. Sheardown, Stockton;

Recording Secretary—Dr. C. H. Boardman, St. Paul;

Corresponding Secretary—Dr. A. F. Ritchie, Duluth;

Censors for three years—Drs. J. C. Rhodes, and V. Smith.

Dr. McGaughey was introduced to the Society by the retiring President, and expressed his thanks and gratification at the honor conferred upon him.

Dr. Stone moved that the gift of two hundred dollars made by the Society last year to the Secretary be repeated; the motion was seconded by Dr. V. Smith.

The Secretary thanked the Society for their kindness and generosity, but protested against the adoption of the motion, and moved as an amendment that it be laid upon the table.

The Treasurer expressed a hearty wish that it were practicable to carry out the terms of the motion, but explained that the state of the treasury would make it impossible.

The motion to amend not having been seconded, the original motion was carried.

The report of the Committee on Diseases of Children was referred to the Publication Committee.

Dr. Hewitt invited the members of the Society to provide themselves with cards, to be procured from him, for recording cases of contagious diseases.

The thanks of the Society were tendered to the Wash-

ington County Medical Society for their hospitality, and to the retiring President.

The following committees were appointed for the coming year:

Executive Committee.

Daniel Leasure, Chairman.

E. J. Abbott, D. W. Hand, A. B. Ancker.

Committee on Practical Medicine.

D. F. Brooks, Chairman.

W. L. Beebe, R. O. Beard,
G. A. Hewitt, R. D. Barber.

Committee on Surgery.

F. A. Dunsmoor, Chairman.

D. P. Bigger, W. J. Mayo,
C. A. Wheaton, P. H. Millard.

Committee on Obstetrics.

C. A. Stewart, Chairman.

Lizzie R. Wass, A. MacDonald,
M. V. Hunt, E. B. Bigelow.

Committee on Epidemics, Hygiene and Climatology.

A. T. Conley, Chairman,

J. Owens, A. B. Cates,
J. B. Dunn, E. Y. Chilton.

Committee on Finance.

A. H. Lindley, Chairman.

F. J. Hutton, A. G. Stoddard,
G. M. Coon, A. K. Norton.

Committee on Necrology.

J. E. Finch, Chairman.

J. H. Murphy, V. Smith,
S. P. Squires, J. C. Rhodes.

Committee on Publication.

J. C. Markoe, Chairman.

W. Davis, C. H. Boardman,
A. Shimonek, S. B. Sheardown.

Committee on Nervous Diseases.

C. E. Riggs, Chairman.

A. C. Fairbairn, W. C. Eustis,
F. E. Bissell, D. B. Collins.

Committee on Gynæcology.

Mary G. Hood, Chairman.

A. J. Stone, A. W. Daniels,
F. Staples, G. W. Emery.

Committee on Diseases of Children.

C. L. Wells, Chairman.

T. M. Marcellus, C. Q. Scoboria,
Belle M. Walrath, F. O. Sherwin.

Committee on Materia Medica.

H L. McKinstry, Chairman.

F. A. Blackmer, L. H. Munger,
J. C. Adams, Daniel Straw.

Committee on Ophthalmology and Otology.

F. Allport, Chairman.

C. Williams, J. F. Fulton,
J. W. Chamberlin, D. S. Cummings.

Committee on Medical Education.

E. J. Davis, Chairman.

J. Davenport, D. A. Stewart,
R. O. Craig, J. A. Dubois.

Committee on Medical Jurisprudence.

G. W. Wood, Chairman.

J. E. Moore, L. F. Pitkin,
J. R. Howes, W. Frisbie,

Committee on Pathology.

Chas. Simpson, Chairman.

C. B. Witherle,
G. Vivian,
Mary S. Whetstone,
J. H. Dunn.

Committee on Orthopœdic Surgery.

E. F. Horst, Chairman.

C. Hill,
J. A. Macdonald,
C. Berry,
S. C. McCormick.

Committee on Medical Societies.

F. Milligan, Chairman.

W. R. McMahon,
N. S. Tefft,
A. E. Senkler.
A. W. Giddings.

Delegates to the American Medical Association.

J. H. Murphy,
G. F. French,
C. A. Wheaton,
F. Staples,
E. S. Gibbs,
Kee Wakefield,
T. S. McDavitt,
W. W. Mayo,
C. E. Smith,
H. H. Kimball,
Talbot Jones,
C. H. Hunter,
C. N. Hewitt,
E. C. Cross,
G. H. Knight,
D. W. Hand,
A. J. Stone,
S. D. Flagg,
C. Berry.
A. C. Wedge,
J. C. Rosser,
E. J. Davis,
A. F. Richie,
A. O. Gilman,
P. H. Millard,
Annie F. Wass,
F. H. Milligan,
F. M. Rose,
W. H. Pratt,
F. W. Van Dyke.

The Society then adjourned to meet in Saint Paul, at 10 A. M., upon the third Thursday of June, 1885.

C. H. BOARDMAN,
Secretary.

ADDRESS OF WELCOME.

Ladies and Gentlemen of the Minnesota State Medical Society:

To me has been allotted the pleasure of greeting you to-day and extending to you, in behalf of the Washington County Medical Society and the medical profession of Stillwater, a hearty welcome to our grand old town—a town replete with happy hospitality and good will, as well as fortune-favored with the rough and sublime beauty of nature as expressed by her rocky verdure-clad bluffs overlooking the beautiful river and Lake St. Croix.

We greet you as a semblance and development of those gatherings in olden time upon the classic hills of Greece in the temples of Æsculapius; erected upon healthy sites, near fresh springs and surrounded by shady groves. The first to be gilded with the golden glow of the morning sun, and to receive the first sweet and melodious vibrations of nature's countless song birds. Here, with the inspiration of beautiful and smiling nature, and with God's oxygen in all its purity as an environment, came the sick and the maimed, the feverish and the bed-ridden, the rheumatic and choleric, to seek the mystic aid of the God of Health. Votive tablets and burnt offerings recorded the symptoms no less than the gratitude of those who were healed. Here faith reigned supreme and the physiological action of drugs was unknown. Primitive medicine was thus in the hands of the magician and miracle worker; subtle and narcotic drugs, the pliant wand with which the wizard strengthened his incantations, dazzled credulity and superstition and secured to himself attributes of om-

nipotency. It is simply a chapter in the history and development of the natural sciences. Of old the mysterious laws and forces of nature were made subservient to the poetic and superstitious imagination of men, aided and abetted by the deductive method of reasoning from a fancied cause or general law to varied phenomena. From these primitive clinical records the half priestly, half philosophic caste of the Asclepiads compiled the data upon which the earliest generalizations of medicine as an inductive science were based.

Every science in its growth passes through three stages: 1st. We have the stage of observation, when facts are collected and registered by many minds in many places. 2nd. We have the stage of generalization, when these well ascertained and carefully verified facts are arranged methodically, generalized systematically, and classified logically, so as to deduce and elucidate from them the laws that regulate their rule and order. 3d. We have the stage of prophesy, when these laws are so applied that events can be predicted to occur with unerring accuracy.

Medicine, up to the present century, has had a long period of incubation relevating it to the first stage—the stage of empiricism. All true science begins with empiricism, though in the end all true science is such in so far as it gets out of the empirical stage into that where the empirical can be deduced from general truths.

The object of science is truth, and truth is the accurate representation in thought of the order and relations of natural things.

Under the Baconian system of investigation, science has made its greatest progress. This system of experimental reasoning consists—1st. In the careful observation of the conditions under which a given phenomenon occurs. 2nd. The varying of these conditions by experiments, and observing the effects produced by the variation; thus throwing out conditions that are merely accidental and

determining those that are invariably antecedent. The man of science then imagines, frames a hypothesis, a mental picture, and then by a mental process of comparison, reasoning, inference and proof, he strives to give truth to his view, harmonizing its parts with each other and with facts. If the hypothesis be true, this or that must follow, and if in all points the theory holds good then he has discovered the law of which he was in search.

At the present time medicine is merging from the first stage into the second stage of our sub-division; in the full activity and energy of the formative or stage of generalization. Grand and great is the work that has been accomplished so far, but compared with that which remains to be done it is insignificant, it is atomic. But the grand possibilities of the future stare every earnest student practioner in the face, presenting to him wide and varied material with which to work and apply the principles outlined above, a never ending pathway through the trackless waste of disease and death with skeletons acting as mile stones; subtle theories and obscure phenomena sufficient to please and pall the most rapacious intellect and give a healthful cerebration.

Fame, honor and veneration await the modern Æsculapian genius as a reward for worthy work in placing our beloved profession more and more within the pale of a science, as well as a name engrossed upon the pages of History for all time. In no profession, perhaps, is opportunity so great at the present time for bright minds to become brilliant and to corruscate and glow before the world, as in medicine. While in other branches of investigation the light of the human intellect has penetrated far and effectively into the darkness by which all knowledge is covered; as the geologist has unfolded the wonderful and thrilling tale of the rocks and given to us the gestation and birth of the world; as the astronomer has with his lens

divine penetrated the starry heavens and brought order out of chaos and demonstrated the Universe to be one immense organism, a mighty machine, complete, adapted, and working in wondrous and beautiful harmony; as the mathematician with sign and symbol deals with space and number and formulates in hard and unemotional figures many a pleasing and beautiful theory; as the chemist coolly and inexorably chases the flying atoms as they "march in tune moving to the music of law," and finally gives us as a result the elemental structure of all material things; as the biologist studying the phenomena and conditions of life delves into the depths of the sea and finally follows animal life from the complex and sentient man to the simple and passive organism that lies on the border line between the animal and vegetable kingdoms, and when placed in his mental balance mystifies and perplexes and he is at a loss whether to label it animal or plant; as the psychologist with characteristic scholasticism and dogmatism indulges in wordy and acrid combat with friend and foe, and with commendable intro-spective energy vainly endeavors to "build the bridge that spans the mystic gulf from God to man," and explains our emotions, will, power of reasoning, and other god-given faculties to his complete satisfaction; so the student of physiology and pathology, of disease and curative medicine, is dealing with matter, physical forces, atoms and molecules, and in a domain where investigation and generalization is far from being as complete as in the preceding branches and the darkness is illumined but feebly. All the more incentive then for us to work, to observe, to classify and to formulate.

It is for this purpose that we are gathered together today. We possess the mass of evidence and facts gathered by many minds in many places during the long period medicine was passing through the first stage of its development.

At this annual meeting we have in object the mental

attrition of the profession of the State, the giving up to each other, in behalf of the common cause, the jewels garnered in the past twelve months' work, to verify facts, and arrange them methodically, and classify them logically, and to seriously endeavor to deduce from them some law and order that may be an additional guide to us in the labor and scientific inquiry of the year before us.

Outside of the great cities and hospitals scientific and literary work in medicine must of necessity fall to the lot of the young men. The hard worked general practitioner finds no time for the careful pursuit of experimental physiology and pathology. It is even difficult for him to give the time requisite to an accurate and profitable clinical study of any individual case, much less the wearisome process of following the case in all its bearings, and comparing it, according to the scientific method, with similar cases in other hands, and then, with scientific spirit, bring such rule or order out of the mass as will serve as a correct guide hereafter.

Clinical medicine has to be studied in the light of pathology, pathology in the light of normal anatomy and physiology, and the latter in the light of chemistry and physics. The practitioner must carefully learn all methods of investigation and skillfully apply them. Stores of knowledge must be at his command, and the reasoning powers must be called into play to a degree probably not surpassed in any other profession. You may readily see that it is the young man fresh from the schools, patiently waiting and watching for the confidence of the community and the developement of gray hairs, that has the time, and whose province it is, to do this work.

This indirectly brings me to the consideration of one of the important functions of a society of this kind. The influence which such a society should have upon the scientific character of individual workers. It should

encourage and improve the good workers; it should expose and repress the bad workers; and it should frame for the guidance of all alike a standard of work which will elevate the profession and benefit our art. It should ensure great care, patience and accuracy in observation, a rigorous fidelity in the record of therapeutical experiments, wise caution in speculation and theorizing, grave deliberation in judgment, a frankness in the confession of error, stoical severity in sifting and testing of conclusions, an effacement of personality in the work, a deep sense of the responsibilities of premature speech and writing, a moderation in the conflict of opposing views, a robust and manly spirit of scientific life, and a freedom in making admission that there is no unconditional truths in the results of our inquiries, no finality in our finished work, and no creed in medicine.

As a type of the bad workers, we have the man who is intolerant of the patient and painful toil of the true worker. He is acute in power of superficial observation, gifted with a certain showy versatility, quick at catching hold of new ideas, ingenius in guessing, crude in experiment, loose in therapeutic trials, hasty in speculation, strong in dogmatic assertions, accomplished in pilfering other men's work, facile in speech, ready in writing, and thirsting for notice. The favorite pasture of this man is in the field of therapeutics, and his pastime the juggling with remedies old and new, the putting of them to new uses and the setting forth of their successful results. These men discern no difficulties and have no failures, and they constantly cry "cure." They illustrate their successes by scores of cases and explain them by the most ingenius theories. Such men should receive a wholesome [illegible] hands of the Society.

The culture of the modern medical [illegible] and broad as well as deep. Not only [illegible] sciences in general become so vast and

life, the psychical life with the mysterious and seemingly slight but intimate connection and dependence between matter and mind. What is the principle of growth of that subtle power which culminates in reason, will and the emotions? How are the different grades of mind to be accounted for? What is the pathological condition which dethrones reason and causes the strong intellect to run riot with discordant, clashing, incoherent atoms?

Then in organic chemistry, with the motive energies of the animal world referred to the combustion of food, we have a great field of investigation open for discovery and experiment in determining the chemical composition, ratio and proportion of the elemental substances making up the various tissues and organs of the body, and by synthetic chemistry producing the structure anew in the laboratory. The remark of Huxley is not altogether wild when he says that it is a laudable ambition and a not improbable event for the chemist to look forward to the day when the proper elements in proper proportions and under proper conditions may be placed in a retort and the outcome be a full-fledged fœtus.

As to the stage of prophecy in medicine little can be said, but much may be hoped for that happy day when we, as masters of the law of cause and effect in disease, can tell our patient with unerring accuracy how many days it will be necessary for him to swallow pill and potion, or the number of hours that will be consumed ere the sands of his life will have filtered through the hour glass of time.

Now that the work of this assembly awaits us, let us turn to it with relish and energy. The object of it is not mere interest or occupation, not mere success or failure, not mere profit or loss, not mere distinction for ourselves, nor even honor for the profession to which we belong. The true and serious object of our work is the prevention of disease, the relief of suffering, and the

prolongation of life. And this object, not only in the restricted sense of our obligation to the individual and the family in these important particulars, but it involves the life and welfare of the State and World. For our work as it is intelligent and good, successful or unsuccessful, affects for good or evil the numbers and physical constitution of the population, the supply of labor and sources of wealth, the education of the young and the direction of their energies, the moral conditions of society, and the development of the human race, and the fullfilment of its destinies. We see thus the far reaching and momentous influence of our profession and the solemn responsibilities which lie upon us when we undertake and faithfully discharge its duties. Such reflections should urge us to a spirit of self-sacrifice in active and earnest work to overcome our ignorance of disease, till at last, as masters of our profession, medicine occupying a position commensurate with her sister sciences, we may know and foresee, prevent and control, relieve pain and cure disease, repulse grim death in its ravages upon strong men and innocent children, and renew the conditions of a completed life, in full accordance with the method of nature in all its purity, and when we may lay claim with some reason to the boast of Hippocrates that we give help like gods to men in their extremity.

It is but fitting that we prelude the work of the coming session with a fragment of the beautiful and earnest prayer of Agassius and bow our heads in reverence to the humble and soulful spirit there expressed:—

"As with fingers of the blind,
We are groping here to find
What the hieroglyphics mean,
Of the Unseen in the Seen,
What the thought which underlies
Nature's masking and disguise,
What it is that hides beneath
Blight and bloom and birth and death."

PRESIDENT'S ADDRESS.

Some time, no matter as to the exact date save that it was since our last annual gathering, there fell on my ear this expression of opinion from one of our number: "It is not our business nor is it for our interest to instruct people how they can prevent sickness, but rather the opposite course is beneficial to us of the medical profession, as our income inures largely from or as the result of violation of rules for the preservation of health, and if we instruct our patrons too much, our finances will be decreased." With no desire to question the truth of the statement of the member quoted or the logical outcome of his reasoning, were I even suspicious that a large minority of the members of this Society were in sympathy with his expressions, I would sooner be at this hour trudging up yonder street bearing on my shoulders that truthful symbol of a slavish life, the saw-buck, surmounted by its fitting fellow the buck-saw, or standing on one foot in the back-yard of some insignificant residence amputating from some tough old cord-wood stick the regulation stove length. No, gentlemen, the sentiment as expressed is not the watch-word of the true physician now, nor has it been in any age which has a record in history.

The physician is the sanitarian in every land, in every age, and to whatever rank he may attain his greenest laurel will express this fact. His speech and his labors will manifest to the world that his highest ambition is to make mankind as an entirety wiser, nobler, happier. 'Tis true you cannot all be clothed with municipal authority, and thus, armed with the governor's warrant, march forth

at a moment's notice, and step on a case of small-pox wherever it shall raise its head, and stamp it out; for which bold act, if accomplished, you might receive the plaudits of the chief executive of the commonwealth, and have the grand results of your exploits proclaimed in the secular press far and wide, as that engine either for good or harm may reach. Neither can you all officially proclaim that diphtheria or typhoid fever are caused by sewer gas; and, perhaps, if another decade should be added to our field of labor, observation, and research, we might not be sorry that we were not called upon officially to go on record as defenders of these and many other theories of daily incubation and of yearly demise. But the sanitary problems which the physician must wrestle with or pass around in ignoble silence, are not few, nor are they of small moment. They will stare him in the face from day to day, and their ghosts will flit past him in the dark hours.

Civilization tends to decay. To prove the truth of this statement requires no labored argument, no learned philosophy, no wisdom of the schools. The novice in history reads it in the fate of nations; each dynasty had its rise and decline. Whatever theory the philosopher has advanced and defended to account for the fact, we are constrained to reach a final conclusion that the causes are numerous and that they are inherent. Disease as an entity has never proved a large factor, even in crippling a nation's resources in any one decade, even when the plagues of the old world decimated the population as a whole. If the doctrine of Malthus were true, an occasional epidemic of a fatal character would be a means of strengthening a nation rather than a menacing element. Without farther speculation in that direction let us pursue the enquiry: What can the physician of to-day in the capacity of a sanitarian originate and pursue in order that he may lend his share of aid, which may prevent detiora-

tion and postpone decay in his own community, in his own commonwealth, in his own nation, and not that alone, but that shall assist in aiding his own community as an integral part of the nation to advance in all that tends towards an ideal nation?

The Spartan mother had for her ideal the son who, by his physical powers, could command or compel; and hence her parting direction and benediction, "Return bearing your shield or borne upon it." But the day is passed by when the "highest virtue was to slay an ox," and for centuries the brain worker has been the highest type of civilization. With the advance of science and art and that general culture which is their alley, there comes a strain constant and potent upon the brain, and through that organ upon the entire nervous and muscular system, which tries the soundness of the individual and of the race. Now this strain must be borne by the individual and by the nation; or, failing in this, rupture and disintregration will result. And so the better the standard of civilization the more care must be displayed to protect from harm or destruction the individual and the community. The household occupying exclusively one hundred and sixty acres, however careless they may be in their habits of life, can hardly in a single season polute the creek that runs through the farm, and the winter freezing and the spring freshet will renew its purity, and so many years may pass and no harm come; but increase the volume of poluting material by increasing the number of inhabitants along the borders of the stream and danger comes all unannounced and takes by surprise even observing men. What is the duty of the physician in this matter? Simply to inform the inhabitants that there might be danger from that source and so let the matter rest.

Can we clear our skirts of the crime of tolerating a known danger by this slight word of caution? By no manner of means. The physician, if he be true to his

high calling, owes more than this to society, and he who best understands the danger and the remedy will not only best serve the interests of society, but will best serve himself, and need never fear that the millenium is so near at hand that his craft is in danger from an absence of disease or casuality. The physician must not only preach but he must practice what he preaches. He must imitate the hard-shell preacher of the past generation and preach three times Sunday, and on week days whenever he can gather a hearing. He must never forget to practice what he preaches day by day and every day. The ideal physician will allow no vault on his premises whatever may be the character of the soil, and if the soil is in any degree porous, he will not allow a well used on his premises unless he can control the premises of his near neighbor in the matter of a vault. He will not tolerate a single room in his house without an active ventilation which will afford pure air day and night, summer and winter, rain or shine; and not only will this be his position in regard to his own habitation but he will not cease to insist on a similar condition in the premises of those who heed his advice.

I am well aware that the task is a thankless one, that it would almost discourage a brave heart; that he will often meet with rebuff; that his advice will often be well received and as well neglected. But this treatment should never tempt him to surrender. He will find among his own profession those who will say, "when you want fresh air open a door or window," and if you suggest that it is impracticable in the more severe weather, will reply that you do not feel the need of fresh air in the winter as you do in hot weather, utterly forgetting that the danger from impure air lies in this, that you cannot detect the poison by your senses.

If these things are done in the green tree what are we to expect of the dry? If these assertions are true of the graduate in medicine, what are we to expect from those

who have not made themselves familiar with the elements of hygiene even as somewhat loosely taught in our public schools.

Half mastered elemental knowledge is more dangerous than utter ignorance, for the reason that the smaller share of learning may make one more bold and presumptious. Therefore must the ideal physician ever strive to perfect himself in all sanitary science and ever be able not only to direct but to be able so to explain and establish the doctrines that he would establish, so that his words shall carry conviction and shall be received as authority by his patrons.

You question whether this can be accomplished, and I reply, there is no valid reason why the patient who will swallow in accordance with your "ipse dixit" one-fiftieth of a grain of nitro-glycerine, one-twelfth of a grain of phosphorus or one-twentieth of a grain of strychnine should not as readily follow any sanitary direction you might be pleased to give, were you equally in earnest in insisting upon your directions being adhered to. The fact is not that too much attention is bestowed on the medication of the invalid even where the tenets of the doctor induces him to put in two glasses of water that which the chemist cannot detect as a medicinal quantity and where the patient is to take a teaspoonful and alternate hourly. No one now denies the effect on the invalid of this form of medication, for the mind in sickness is oftentimes master over the body; but it is a fact that we do not insist on that regularity, or even on any formal method with regard to the hygiene of our invalids and so the mental effect of the regular teaspoonful of water has not a corolary when we come to the hygiene of the invalid's environment.

And now lest I weary you before coming to a subject to which your undivided attention is most earnestly solicited, let me present the subject for your thought in these questions: To what extent are physicians responsible for

the abuse of alcohol by the people at large? How great is the evil and the danger arising therefrom? What is the remedy?

At the outset let us give heed to the magnitude of the evil. Let no fear disturb your minds at this point that I shall in any degree aim to sustain the theories of the temperance fanatics; or the theologians who would be politicians; or their allies from either of the professions; or their more powerful coadjutors, the former inebriate, who has simply changed one form of extravagance for another. To none of these are we to look for truth in this study. We are to look to the skilled observer, and base our conclusions on his statements, strengthened and fortified by our own patient and unbiased observation.

Crothers, one of the experts in this matter of our own country, whose studies have been made from the standpoint of superintendent of a retreat for the cure of inebriety, says, in unqualified terms:

"Inebriety is increasing far more rapidly than the increase of population. Some of us will doubt the truth of this judgment, but are we prepared to refute the statements by any well-collected statement of facts?"

Just what condition constitutes inebriety we might not agree upon, but when we, in the spirit of honest enquiry, turn the horoscope of memory and glance back over the years of our professional labors, especially those of us who have assumed the silver grey, we shall wish to ignore exact figures. Many a friend with a bright brain and a warm heart has passed behind the cloud and left only a saddened memory.

The writer quoted, continuing, remarks: "What we want is knowledge of the forces and causes which induce inebriety. As medical men it is our duty to find out these causes and the laws which govern them, and he who enters upon this field of study has touched the shores

of an almost unknown continent, about which to-day there are written thousands of volumes, whose descriptions of this country are worthless, and whose theories are but fogs and superstitions of the infancy of the subject."

Quoting further from the same writer, let me bring before your minds in rapid succession some of the terser sayings of the writer: "The time has come for physicians to teach the public what inebriety is and what it is not. The problem is a medical one and can only be solved by an appeal to facts gathered from many sources by accurate observers, and every physician in the country can study inebriety in his own circle; he can grasp facts and their meaning and help to solve a problem against which theory and speculation can have no force."

"Is inebriety the outcome of physical conditions and surroundings?"

"Is inebriety a physical disease?"

Here is a field where the trained medical observer may explore without trespass.

Gentlemen, if it is the duty of the doctor as sanitarian to study the causes and the preventive means to be observed in an epidemic of typhoid fever which never causes great alarm to the sanitary officers of a community when the per cent of fatal cases does not exceed thirteen, or when small pox is rife and not more than one in ten die, or when diphtheria prevails and the physician reports his *success* when two-thirds of his cases recover, will you, can you feel that you are fulfilling your whole duty to a community when you ignore the cause, the prevention and the result of a disease more fatal than either of those recited, and one where the fatality to the patient is not the major evil in many of the cases.

The physician is proverbially a man of little sentiment, often accused of want of sympathy because he has to carry his sympathy within, not on the outside;

but the man who has well studied the subject of heredity from the stand point of intelligent observation in his own circle must have strange notions of human sympathy if he feels less sorrow for the offspring of the inebriate, male or female, than for the inebriate himself, let his present condition be what it may.

Were the direct question put to each one at this moment, "Have you given some thought to the subject of heredity in a general way?" few of us would be willing to acknowledge that we were all at *sea* on this branch of medical science. Right here suffer me, with a simple proposition, which would not be proper to consider in public save in an assembly where all were doctors.

If you have been many years practicing your profession in a small city or in the more rural domain, you have driven in your daily rounds and longer drives a mare of rare excellence, and as the years rolled by the fact has impressed itself upon your mind that the horse is a short-lived servant, and in the years to come you might want the offspring of your favorite. You cast about for a suitable sire for the filly in which you hope to realize equality if not superiority to the dam. You select the sire, be he Reidseck, Swigert, Von Arnim, or any other name of noble blood and high repute, and though 2–10 or 2–8 could be honestly placed upon the board when the bell struck to call the string to the judges stand, if subsequently you should observe in his exercises or in his box there were eratic movements due to some trouble in his brain or nervous system, without farther inquiry whether it might be due to functional or pathological conditions you would forthwith decide to let the season pass, and look elsewhere for the filly which should swiftly and pleasantly carry you on your daily round. And why? You fear that the *condition* might be transmissible. What then should be your solicitude for the offspring of your sister, or the sister of your wife, or, taking a broader humanitarian view for

the offspring of every daughter of Eve in all the land. Not because indeed the sire of her offspring is an inebriate, but because perchance slightly paralyzed at the festive board his articulation is not exactly rhythmatic or the side-walk on his homeward walk assumes a wavy motion.

Some of you will characterize this as moonshine and more may deem it untenable theorizing.

Study this subject from a scientific standpoint, giving the best thought and the most skilled observation, let theories follow facts, and be sure of your facts, and above all, do not dismiss the subject with a passing breath.

We used the word paralyzed with intention. The profession have been taught, from time without date, that alcohol was a stimulant, and that attribute alone has ever been a popular appellation, and patients have felt the need of a stimulating treatment. It has been popular, and in a kind of slipshod way doctors have prescribed alcoholic stimulants where there was loss of muscular vigor and feebleness of nerve force, and even in exsanguinity, a condition where it may do much harm and never is a means of good, until patients oftentimes feel fully competent to prescribe alcoholic mixtures for themselves or for their suffering friends, without in anywise feeling themselves competent to diagnose the disease or to interpret the symptoms. The physician of course is never guilty of such an unscientific method, unless it be by a tacit allowance of the medication already inaugurated.

But the time has already arrived when, as the result of observation, that strong spoke in the wheel of exact knowledge, the old doctrine of alcohol as a stimulant is losing its foothold, and when the physician who prescribes a stimulant will look for other elements than alcohol, and when he prescribes alcohol will look for other results than stimulation; when its power for good will be better defined, and its harmful effects will be more carefully guarded against.

Among the first to oppose the common received doctrine that alcohol is a stimulant, was Dr. Onotie, of London, and it seems fortunate that he was never an advocate of entire abstinence, as none can accuse him of fanaticism, nor suggest that for this reason he allowed his mind to be biased. His rivals and opponents never accused him of want of fair and calm judgment in this matter. He is seconded in a large degree by such high authority as Richardson, of London, Wilkes, of Guy's Hospital, Ringer, of therapeutical fame, and by Palmer of our own country, who differs from them only in degree. He takes a single step in advance of them and declares it a paralyzant in any and all quantities.

The more careful and extended experiments in physiology in recent times seems to unequivocally prove that alcohol diminishes the power of the heart's action in all quantities, and when the amount taken is sufficient to stop the action entirely the arrest is always in *diastole*.

If this statement be true, and the proof looks fairly good, should not every physician teach that to the layman, that he may not be led on by the idea that he is getting a stimulant in alcohol, when he is more than ready to believe that he needs a stimulant.—We cannot be too ready to teach truth in this matter, not because we are accused by the *shallow shouter* whose whole stock in trade is in the hollow word "reform," and who, instead of leading any true reform, worries about pointing out the sins of the physician in fostering a taste for the enslaving element. It is not now, when there is no little interest and agitation on the subject of the abuse of alcohol, that we as physicians need to appear zealous in our own defence, but the time is favorable for the reinvestigation of the whole subject in the light of sanitary science, and is an opportune time to cast about and see where we should stand as guardians of the physical, moral, and mental health of the community.

Recent studies in physiology lead us to doubt the propriety of administering alcohol in extreme ænemia, especially where the loss of blood has been rapid and recent, and when a patient dies from hemorrhage and the doctor fails to report that he administered alcohol in any form, in large or small quantities, he will not now be subject to criticism as he would have been in the last decade, for we now know that alcohol destroys the red corpuscles in the blood indirectly if not directly, and from the red corpuscles we derive that nerve force which is necessary to sustain life.

And now in conclusion of the subject let me suggest that if there be one other within the sound of my voice, who like me has witnessed the mental decay of an honored friend from the abuse of alcohol, and can in a moment take in the full meaning of what that condition means to society and friends, I need not suggest to him the magnitude of the evil, nor need I urge him to study this subject in all its relations. The remedy for the abuse of alcohol will not be found in a day, perhaps not in a generation, but that should never deter the true physician. It is within the province of the true enquirer to guard his patients against all drugs that enslave, never forgetting that, the enslavement of heredity may ever be a powerful factor.

Report on Practical Medicine.

A. W. ABBOTT, M. D., CHAIRMAN.

CASE OF GENERAL PARALYSIS AS A SEQUEL OF DIPHTHERIA.

BY A. G. STODDARD, M. D.

The following history may be of interest on account of the rarity of general paralysis as one of the sequelæ of diphtheria.

On the 5th day of February last I was called to see M. E., Norwegian, aged 34, farmer, living in the town of Camp, this county. I found the whole throat highly inflamed; the tonsils were so swollen and œdematous as to lie almost in contact, the sub-lingual, sub-maxillary and deep cervical glands tumefied and tender; small grayish patches, evidently false membrane, over tonsils and uvula; pulse full and bounding; temperature in mouth 104. Ordered gargle 2 per cent. solution carbolic acid every half hour, and the throat to be swabbed every hour with equal parts tr. ferri chl. and water. Gave tr. aconite gtt. 3 every 2 hours and pulv. Dover grs. x. every 4 hours.

February 7th.—Patient's general symptoms somewhat modified. Temperature 100; pulse 105; large, thick, leathery patches of false membrane covering both tonsils, uvula and roof of fauces; breath extremely fœtid; saliva abundant and offensive. With a small pair of dressing forceps I easily detached and brought away pieces of membrane one inch in diameter, leaving a denuded sur-

face which bled freely. Continued local treatment, making carbolic acid solution twice as strong. Ordered Dover repeated as needed to allay restlessness, and a mixture containing quinine grs. iii. and tr. ferri chl. gtt. xx. every 4 hours. Aconite discontinued.

February 9th.—No especial change in local condition; the parts from which large patches had been removed are covered again. The site of the deposit has also enlarged downward toward the larynx, but not so as to impede respiration as yet; patient more adynamic; heart's action rather feeble, rapid and irregular; large masses and shreds of false membrane have been thrown off. Added whisky oz. i. every 2 hours, dose to be lessened if symptoms of intoxication appeared. Local treatment continued.

February 11th.—Patient somewhat better in every way. He had thrown off, in my absence, a cast of the trachea about one inch long. The whisky as prescribed has produced no intoxication and has evidently done much good. Treatment continued.

Febrnary 14.—A severe "blizzard" put me one day behind in my visit to this patient, who lives 15 miles away. I find his general symptoms good. There are remnants of false membrane over a small portion of the right tonsil, but otherwise the parts begin to assume their normal appearance, except a few ulcerated excavations which are filling by granulation. To-day, for the first time, there is complete aphonia. The pharyngeal muscles also fail to contract properly, making swallowing quite difficult, and there is some regurgitation through the nose. Owing to imperfect closure of the epiglottis, a few drops and particles of whatever he attempts to swallow find their way into the trachea, giving rise to violent paroxysms of coughing till they are expelled. Dimness of vision and disordered accommodation are quite marked.

Ordered tr. nux vom. gtt. 15 every 8 hours, and quinine grs. 2 every 4 hours, and a 2 per cent. solution of

carbolic acid as a wash for the throat. I also ordered milk and beef tea per rectum, as a supplement to what he was able to swallow.

February 17.—The patient's general condition presents nothing unusual, except what has resulted from his almost complete inability to swallow food, and the severe bronchitis produced by the foreign substances which have passed through the imperfectly closed epiglottis. There is no false membrane. The ulcers are nearly healed. The diphtheria has left no serious local trace of its effects, except an almost complete paralysis of the muscles of the soft palate, pharynx and larynx. The aphonia is complete and the act of deglutition is a dread to the patient and his attendants.

Such small quantities of nourishment as he, by his prodigious effort, succeeds in getting through the pharynx seems to pass at once into the trachea, little or none passing into the esophagus. By means of a large sized "Tieman's Velvet Eyed" soft rubber catheter and an ordinary bulb syringe, which I happened to have at hand, I improvised a very ready means of artificial feeding. The patient himself soon became quite expert in this novel method of "passing the catheter."

Thus, for nearly a month, the case ran on. All the symptoms, except the local paralysis, slowly but surely improved under the beef-tea, whiskey, crushed crackers, and milk, maltine, quinine and strychnia, which found their way through the catheter. The patient continued hopeful, and began regaining lost flesh.

March 15.—Upon visiting my patient to-day—not having seen him for about one week—I find that, in addition to the local paralysis, symptoms of general paralysis begin to appear. Both the lower and the upper extremities are paretic, and, to use the whispered words of the patient, they feel "numb and prickly." I did my best to cheer him up, expressed my utmost confidence in the

result, and continued treatment, increasing the strychnia to 30 drops of tr. nux vom. 3 times a day.

My subsequent visits were made at intervals of from 4 to 6 days. The paresis became perfect paralysis in about one week. He became utterly helpless as to both upper and lower extremities, and could not so much as stir a finger.

About the 1st of April the use of the stomach tube could be entirely dispensed with, he having regained almost perfect control of the organs of deglutition, but the general paralysis had not improved, the patient remained "*in statu quo.*"

June 2.—There has been no indication thus far, that the muscles of respiration are threatened, the breathing is somewhat more shallow than normal, but this is probably due rather to the generally enfeebled condition of the patient than to true paralysis of the chest muscles, and there has been no positive dyspnœa at any time. To-day I fined marked improvement. The flexors and extensors of the fingers and toes can be quite perceptibly contracted. The patients appetite is good—bowels regular, and the case passing steadily from a somewhat doubtful, to a more hopeful one.

June 9.—Upon making my regular weekly visit to-day I find my man able to use his legs and arms, though feebly.

June 16.—Patient able to stand alone and to take a few feeble steps with the aid of a staff. Upon shaking hands with him to-day I find that his grip has about one-half the force of my own which is fully up to the average. I now consider the final outcome of this case to be beyond all doubt, and I shall look confidently forward to his perfect and speedy recovery,

This is the first case I have seen of general paralysis following diphtheria, and I believe cases so obstinate and severe as the foregoing are quite rare. The treatment

throughout was by the best alimentation available under the circumstances, and nerve tonics—especially strychnia which was pushed to the maximum and kept there for nearly 2 months, but I am convinced that the period of his greatest improvement dates from the time when,in addition to the strychnia I begun the administration of Liquor Potass Arsenitis—30 drops daily—in divided doses. So favorably am I impressed with the beneficial effect of the arsenical preparations, as exemplified in this case that in another similar one I should begin them earlier, and push them presistently, provided no gastric or other symptoms of arsenical poisoning appeared.

PURPURA RHEUMATICA.

BY M. C. MERCER, M. D.

Patient G. W. Smith, age 67, American, physique robust, weight in health about 200 lbs. Several times had "acute rheumatism," sometimes severe. During writer's observations of ten years his health was mainly good, interrupted by a few rather light and short attacks of acute rheumatism. About the last of August, 1883, he lost a bright ten-year-old son. This seemed to weigh upon his spirits; there was a manifest lack of buoyancy and exuberance of spirits so characteristic of him habitually, and throughout his illness there was a marked absence of the spirit and courage usually with him in time of trouble or sickness.

Dec. 17.—For several weeks he had been feeling rather "unwell." On this day I was called to visit him. The most marked symptom was "languidness," an absence of "tone." Pulse 86, soft, good volume.

Dec. 18.—Condition as preceding, and in addition, knee joints slightly swollen and somewhat sensitive to pressure and motion.

Dec. 19.—General condition as on 18th, with knee joints rather more swollen, also ankle joints swollen—left one most so; sensibility and pain of swollen parts increased, but still less in degree, than in parts equally swollen by acute rheumatism. Throughout the illness there was no redness, glistening nor exalted temperature of the swollen joints.

Dec. 20.—Condition about same with slight swelling of eyelids and ecchymoma in lumbar region; swelling and pain of joints increased, and extravasation of blood beneath mucous membrane of uvula and soft palate and pharynx.

Dec. 21.—Increased swelling of eyelids and increased number of spots, they appearing on lower limbs and on nates and on face; the face continued to darken and swell until on eleventh day the eyes were tightly closed and face so swollen, misshapen and discolored (black as an African) as to be altogether unrecognizable except by those seeing him daily. After eleventh and thirteenth days, swelling and color of face declined considerably.

Pulse.—From first to fourth days, pulse 86 to 90, thence gradually rising till last four days 104 to 112; of "softened quality" throughout illness; its force declined as its rapidity increased. (Pulse felt like one softened by veratrum viride.

Tongue.—At first covered with thick, lightish colored coat, shortly became clean and remained so.

Stomach.—Fair tolerance of medicine and food till about the eighth day, when irritability of stomach became such that food and medicine were administered by enema.

Bowels.—Throughout sickness a disposition to constitution; during last six days bowels became irritable so quantity of enemata had to be reduced to two or three and at lengthened intervals.

—Normal in quality, also in quantity, till last day somewhat diminished.

Hemorrhage.—About tenth day hemorrhage from left eye occurred and continued till death; the blood quite dark and "broken down." On ninth and tenth days hemorrhage from bowels, four to six fl. oz. in all; extravasation of blood on nates, covered a surface probably ten inches square, the skin seeming much thickened and indurated, much resembling sole leather.

Sweating.—During last eight or ten days on inner aspect of thighs, profuse sweating, very rank and offensive, strikingly peculiar, such as I have never observed elsewhere. The sweating increased in profuseness till death; its quality constant.

Vesicles.—None.

Sleep.—Mainly from opiates.

Treatment.—Opium, ergot, sulphate cinchonia, acetate lead.

Nutrition.—Brandy, milk, eggs.

Subsultus.—During last four or five days, but neither very marked nor continuous.

Mentality.—Till about eighth day state of patient's mind seemed normal, then began to slightly wander occasionally; replies not always readily given; comprehension became less clear and replies less ready; about the ninth or tenth day delirium, occasional, well marked, though neither violent nor noisy but increasing in frequency and duration: intervals of rationality becoming shorter and less marked; about three days before death the thickened and stiffened condition of the lips rendering pronunciation difficult, almost impossible; apparently for this reason patient resorted to spelling his words, correctly for perhaps 24 hours, then began to wander in spelling, adding letters and syllables without apparent reason and having no relation to each other. During last 24 hours it was impossible to obtain relevant response; coma increased to lethargy, to carus; death occurring 7:45, January 6th, 1884.

CASE OF CALCAREOUS DEPOSIT IN THE LUNG.

BY DANIEL LEASURE, M.D., OF ST. PAUL.

On the 2nd of April I saw H. B., a business man, aged 43 years, and found him laboring under sub-acute heptatites, confined to the upper portion of the convex surface of the liver, which was tender on deep pressure well up toward the diaphragm. Pulse 90, temperature 102, with icteroid staining of skin and turnica adriata, showing evident tendency to jaundice. The tongue was heavily furred and dry, the kidneys very inactive, and bowels constipated. There was general dullness on percussion over the lower third of the anterior lobe of the right lung, with an almost total absence of respiratory murmur in that portion, showing grave hepatisation of the lung. There were nocturnal chills, followed by profuse perspiration and very great general prostration, with entire loss of appetite. Evidently there was inflamation of the upper part of the convex surface of the liver, extending by contiguity of surface to the concave portion of the lower part of the middle and posterior lobes of the right lung, but where the starting point had been was a question I did not attempt to decide in the early history of the case. The first indication seemed to be the necessity of relieving the hepatic inflamation so as to start off the accumulated bile retained in the blood, and set free the glandular system of the alimentary canal so as to secure free elimination of retained secretions. To accomplish this I ordered the twenty-fourth of a grain of calomel and the forty-eighth of a grain ipecac biturated in sugar of milk, to be placed on the tongue, and swallowed every hour, till twenty-four doses were taken, which

occupied a portion of the second and all of the third day of April.

On the morning of the fourth day of April, I ordered a seidlitz powder every hour till four free evacuations were produced, all of which after the first were deeply charged with bile. On the evening of the 4th, the patient began to cough, having had a very bad night. On the morning of the 5th his temperature was 103, pulse 106, with dry, racking cough and tough white sputa. Eight grains of Dover's powder were ordered every three hours during the day, and in the evening I found his condition more comfortable, with a temperature and pulse same as in the morning. On the morning of the 6th he was much in the same condition, having passed a sleepless but not painful night. Had a severe chill during the night, followed by profuse perspiration. Discontinued the Dover's powder and gave three grains of quinine every three hours till evening. Ordered a grain and a half of opium and four grains of gallic acid at bedtime. Morning of the 7th.—Rested well during night, had no chill and no night sweat.

There was no perceptible change either way till the 11th, when on my morning visit I found that he had passed a bad night and coughed a great deal, and there were much pus and many blood streaks in the sputa. Temperature 99, pulse 96. Urine which had been scanty, a little more plentiful but still less than it should be in quantity. Ordered nutriment in the form of milk and lime-water, to be given every two hours with a teaspoonful of a mixture containing ten drops of the muriated tincture of iron and one grain of quinine to the teaspoonful.

12th.—Found patient no better, cough very aggravating with bloody sputa. No urine had passed—introduced catheter and drew off eight ounces. Treatment continued.

On the morning of the 13th I found he had ruptured an

abscess in the lung and had discharged about a pint of blood along with half a pint of pus. Had passed no urine; drew off six ounces; ordered half-teaspoonful doses of fluid extract of ergot every three hours with the pill of opium and gallic acid at bed-time.

On visiting him on the morning of the 14th and drawing off his urine, he called my attention to some hard substances he was coughing up, and I found them to be calcareous deposits ranging in size from a mustard seed, to an eighth of an inch, by half an inch. They came up along with the pus accompanied by some blood. Hereafter an abscess ruptured about every third day with free emption of pus and small hemorrhages. This state of affairs continued without much variation till the 19th, when in my absence in Dakota he was seen by Dr. Jay Owens for me, and he reported another abscess opening on the night previous. The calcareous deposit continued to be discharged to the amount of about half a teaspoonful daily along with near two pints of pus and blood, until altogether he must have passed nearly a gill of what proves to be crystalized phosphate of lime, evidently found in the tubes or vessels of the lung, and being a foreign body was eliminated by a local inflammation resulting in abscess, thus setting free the deposits to be discharged as any other foreign body would be, if imbedded in the tissues of the lung.

During the progress of the case his strength was sustained by milk and animal broths, and iron, quinine and strychnia were given along with wine and beer *ad libitum*. On the 30th he was so much improved as to be able to walk around and his convalescence has been steady but not rapid. I saw him on the 2d of May and as he was still coughing up phosphate of lime, I put him on the use of a teaspoonful of dilute phosphoric acid in a glass of sweetened water after each meal and after its use for a week the phosphatic deposits disappeared. I have seen

him at short intervals since the 20th of May and he seems to be progressing favorably.

I have seen in all five cases of calcareous deposit in the lung. The first in the Blockley Alms House, in Philadelphia, in 1840. The subjects have all been men in or past middle age. This is the second case occurring in my own practice, the others I saw in consultation. None of the cases proved fatal at the time or during the period they remained under my observation, and yet so grave a lesion in its very nature must ordinarily be one of strong fatal tendencies. I have reported this case very briefly, on account of its rarity, and more particularly for the purpose of asking for the results of the observations of members of this Society of similar cases occurring in their practice. The literature of the subject is, I think, somewhat meagre, and the etiology of the disease is at least somewhat obscure, and I have refrained from advancing any theory on this last point, hoping that the more modern teaching and more thorough reading of recent authorities, enjoyed by the younger members of the Society, may help us to arrive at some rational method of accounting for this rare and certainly threatening disease. I have here some specimens of the expectorated lime deposit, which I submit for your inspection.

Report of Committee on Surgery.

C. H. HUNTER, M.D., CHAIRMAN.

Mr. President and Gentlemen:—

Your committee would first tender their thanks to those members of the Society who have so generously responded with communications to their appeal for assistance in making their report. Aside from these papers, which it is our pleasure to submit for your consideration, your committee wish to call attention to a few only of the most salient features of the surgical progress of the year.

The chief work of surgeons is still in the domain of abdominal surgery. In this field, largely through the labors of Mr. Thornton, extirpation of the kidney now enables us to extend a helping hand to cases hitherto considered hopeless.

The honor of first attempting this operation in the Northwest is, I believe, due to one of our own number, and though the case was unsuccessful, we trust, now that the ice is broken, other and successful attempts may be reported.

[Since this report was read at Stillwater, Dr. French has performed another allied operation on the kidney, namely, nephrotomy, emptying and draining the kidney of an enormous quantity of pus. The patient improved for a time, but finally succumbed on the 16th day after the operation, from inanition. The condition had been diagnosed and the operation advised six months before, and I have no doubt that this delay on the part of the patient cost her her life.]

[Judging from these two operations, I conclude that the first operation, extirpation of the kidney, is extremely difficult of execution, tedious, and hazardous. This is especially true when the attempt is made to extract a large kidney through the lumbar region. The second operation or incision into an abscessed kidney is easy of execution, and when attention is paid to antiseptic details, not dangerous. Nephrotomy is preferable to nephrectomy, if the abscess has attained to any considerable size.]

The London *Lancet* of May 31st contains two notable papers, in which the enterprising surgeon threatens to conquer still other territory from his brother practitioner of internal medicine.

Thus far the lungs have been considered his peculiar field, or even resection of a rib might be preferable. All the operations reported were done aseptically.

Discussion is still rife over wound treatment, with the advantage still in favor of the principles and practice of Mr. Lister, or some modification of them.

The search for a better antiseptic than carbolic acid still continues. The serious accidents that have happened with corrosive sublimate fatally discredit it. One such accident has come to my knowledge. The search will go on, for the objections to the carbolic are serious. Still if one would remember to always use the protective to cover the wound and never promiscuously drench the wound or abscess cavities with even weak solutions, the results would be more satisfactory I have no doubt. I prefer, myself, to have the surface of gauze next the wound, whether it be prepared with carb. acid or cor. sub. plentifully sprinkled with finely powdered boracic acid. The effects of this agent on the wound and in preventing putrifaction of the discharges, pleases me better than those of iodoform. In one case of caries of the femur, I was able to leave the

dressings a week at a time without the discharges getting at all foul, and greatly to the advantage of the healing.

A lack of regard for this detail, accounts for unsatisfactory results in the use of carbolic acid dressings. One cannot emphasize too much the fact that to allow a 4 or 5 or even 2 per cent. solution of acid to lie directly in contact with the wound, or to deluge the wound at each dressing with such a fluid, will have none other than a deleterious effect. These and other injurious effects of carbolic acid have lead to much experimentation for a new antiseptic, while carbolic acid is still retained for instruments, the present favorite antiseptic.

As to means of drainage, a suggestion found in Surg. Hist. of Reb. of using a piece of bent watch spring in keeping open and draining fistula, has served me very efficiently.

The cost of gauze has led to several substitutes. The only one I have tried is sawdust, which has proven both efficient and cheap. The best way of preparing it is to take dry pine sawdust, soak it in corrosive sublimate, to which a little salt has been added to prevent formation of calomel; dry it again, when it is ready for use. Apply it over the wound by folding a sufficient quantity in a piece of gauze. It will rapidly absorb a large quantity of discharge, and keep it sweet so that the dressings need renewal only at long intervals.

For convenience in private practice to be sure of always having everything at hand, I have had a small tin box constructed in which to carry the necessary articles. The bottom is divided into compartments for a roll of gauze, ether can, rollers, elastic roller, carb. ac. bottle, graduated, for accuracy in making solutions, boracic acid or iodoform, sponges and tube, nail brush and razor; and a compartment for bundle of sawdust and miscellaneous articles, catgut, silk, etc. Above these sits a tray hold-

ing protective and mackintosh. The cover is without hinges, so that both cover and tray will serve for instruments and dressings at the time of the operation. Around the whole is a leather strap by which it may be conveniently carried. Any tinner can make such a box at small expense.

Without doubt a great part of the service rendered the public and profession by Mr. Lister have been the awakening of the professional conscience in matters of cleanliness. Without doubt, since his time, fewer deaths can be traced to foul instruments and half-moons of dirt under ill-kept finger nails. As in obstetrics, so in surgery, were the public aware of the facts, they stand in much more danger of filth than mal-practice. Without doubt, also, this was and is a much needed lesson.

STILLWATER, Minn., June 18th, 1884.

C. H. HUNTER, M.D., Chairman Com. Surgery:

Dear Doctor: In my report to the Chairman of the Surgical Section of last year was an outlined case of ovariotomy, with the history of the vicissitudes of the patient up to the date of our meeting. At that time the woman was in a robust physical condition, and entirely recovered with the exception of a pus secreting cavity, the size of a small orange. This was being treated with daily injections of compound tincture of iodine. I wish now to call the attention of those interested, to the fact of the complete obliteration of the secreting surface of the sac as a response to the above treatment. Also to the novelty of the case and the last curative measure employed, as I have been unable to find in an extensive ransaction of the literature of the subject, a similar case similarly treated.

Fraternally yours,

P. H. MILLARD.

GUNSHOT INJURY TO THE SKULL WITH NON-COMMUNICATING FISSURE OF VAULT.

BY C. H. HUNTER, M. D.

Through the courtesy of Dr. Fairbairn, I am able to exhibit to the Society the calvarian skull of a suicide presenting an interesting fracture. The suicide was committed by a revolver shot through the head while the individual, a young man, was at stool. He did not fall from the privy seat.

The point of entrance is three-fourths of an inch posterior to the frontal suture and immediately above the squamous suture of the left side. It is nearly round, clean cut, measures three-eights of an inch in diameter externally, beveled internally, and presents one very fine fissure externally one-half inch long, running upwards, and one of the internal table running downward. The point of exit is on a plain above, and behind that of entrance in the right parietal, one-half inch forward of the eminence. The opening is one-half inch in diameter, irregular in outline, beveled at the expense of the outer table and presenting four irregular short fissures. There were several fragments adherent to the pericranium.

The interesting thing about this skull is, however, a fracture beginning at the supra orbital ridge on the right side, running obliquely upwards to the left, crossing the sagital suture an inch and a quarter below the ant. superior parietal angle across the parietal to the left eminence, where it turned abruptly to the right and running nearly horizontally to the right around the skull, crosses the inter parietal suture about one-fourth of an inch above the occipital bone, terminates in the right parietal an inch from the interparietal suture.

The skull is an unusually thin one. I have not been

able to find an illusion to a similar fracture either in the surgerys or in journals at my command, nor in the Surgical History of the war. Nor did I find a similar skull in the museum at Washington on a recent visit there.

From the anterior portion of the fissure being more open than the posterior, and the direction of the bullet it would look as though at the moment of impact the vault of the cranium was sprung, the right half carried backward at the same moment, springing and cracking the arch at its summit. This is the only explanation that occurs to me of this somewhat anomalous injury.

OPERATIVE PROCEDURES FOR THE RADICAL CURE OF HERNIA.

BY P. H. MILLARD, M.D.

I purpose writing very briefly of modern operative procedures for the permanent or radical cure of inguinal hernia.

How to permanently cure a hernia of the inguinal variety has probably engrossed the energies of more surgeons than any one surgical malady. The literature of surgical methods for the permanent cure of hernia is very modern. It is, however, quite probable that researches in this field are more ancient than writings would lead us to believe. To the anatomist the inguinal region is second in importance to no part of the body. You will observe that in the operations of which I shall treat, that your attention will be called to anatomical relations that you were never taught would have any practical bearing in the consideration of this subject.

I desire to call attention in particular to the anatomy of the inguinal canal in being of special interest to the sur-

geon in the extirpation of the sac for the radical cure of hernia. The extirpation of the sac and closure of the tract or inguinal canal, is probably the last innovation in this field of practice. That its advocacy will appear hazardous and be decried as too dangerous and radical by many, I doubt not. Until very recently indeed, the reputation of a surgeon would have been jeopardized by having advocated it. The operation is purely the product of Listerism or Asepsis.

It is today an established fact in surgery, that by proper aseptic precautions, the abdominal cavity can be invaded with comparative safety.

This fact being established we are not justified in a case of strangulated hernia, in giving our patient dangerously large doses of opium, and waiting thirty-six or forty-eight hours before operating. By thus doing the mortality following the operation has been from forty to fifty per cent.

In the light of recent advances in abdominal surgery, it is palpably our duty, when called to these cases to immediately give an anæsthetic, and if found impossible to reduce by manipulation to immediately operate. The latter procedure will probably reduce the mortality fully ten per cent.

The progress made in abdominal surgery the last decade has been phenomenal. This operation was born in King College, London, and the operator, Mr. Wood, made his first operation quite recently. This resection of the sac or some slight modification thereof, has been made by Kaske and Czerny of Germany, and Stokes, Barton, and Franks of Ireland. Dr. C. T. Parks of Chicago, is the only American surgeon I know to have made the operation up to a very recent date. He informs me that he has made the operation fifteen times with but one failure. In that case the sac returned while giving the anæsthetic.

The only literature I am able to collate upon the operation is from my foreign journals since February 1st, this

year. Sir Wm. McCormack when in this country recently, strongly advocated the operation following all cases of operation for strangulation.

I made my first operation with a view to a permanent cure by extirpation of the sac, March 2d, this year. It was subsequent to an operation for strangulation. After opening the sac and dividing the inner ring, I passed a ligature through the sac and gave an assistant to make slight traction, thereby preventing the return of the sac when I returned the intestine and omentum, I separated the partially adherent sac with the greatest care possible. I then passed a double carbolized ligature through the sac close up to the inner ring, ligated and cut the mass away with scissors. I closed the inner ring and wound by deep sutures, used protective and gauze and made very equable pressure.

The case made a very rapid recovery with no peritonitis or complication, excepting a mild orchitis and some œdema of scrotum. I am informed by the attending physician for whom I operated that the man is at work and apparently cured.

In canvassing the merits and demerits of this operation it appears to me that the great indication is, to dissect out the sac with as little injury to the surrounding parts as possible. Particular attention must be paid to the relation of the cord to the sac. The history of the hernia should be carefully inquired into, and if found to be congenital, the operation, in my estimation, should not be undertaken.

In the common form of inguinal hernia, the protruding viscus carries before it the covering of peritoneum (the sac of the hernia) derived from the outer fossa of that serous membrane. Here the hernia and its sac lie directly in front of the cord and vessels. There are two other forms or varieties of oblique inguinal hernia in which the peculiarity depends on the condition of the process of

peritoneum, that accompanies the testis when this organ is moved from the abdomen. In ordinary circumstances the part of the peritoneum connected immediately with the testis becomes separated after birth from the general unity of that serous membrane by the obliteration of the intervening canal; and the hernial protrusion occurring after such obliteration has been completed, carries with it a distinct serous investment—the sac. But if this process of obliteration should not take place, and if a hernia should be formed, the protruded part is then received into the cavity of the "tunica vaginalis testis" which serves in the place of its sac. In this case the hernia is named congenital. The same kind of hernia is occasionally found to be first formed in the adult, obviously in consequence of the tunica vaginalis remaining intact and still continuous with the peritonium.

To the second form of inguinal hernia in which the distinguishing feature depends on the state of the tunica vaginalis testis, the name infantile has been applied. The hernia in this case is covered with a distinct sac which is again invested by the upper end of the tunica vaginalis. The relative position of the two serous membranes (the hernial sac and tunica vaginalis) may be accounted for by supposing the hernia to descend when the process of the peritoneum which accompanies the testis from the abdomen has been merely closed at the upper end, but not obliterated for any length. Hence, during an operation in such a case, the hernial sac is met with only after another serous bag (the tunica vaginalis testis) has been divided. The peculiarity here described has been frequently found present in recently formed hernia of adults. The term infantile, therefore, like congenital, has reference to the condition of certain parts rather than the period of life at which the disease is first formed.

From the above it is [illegible]t that the only possible procedure in congenital [illegible]e hernia is an oblitera-

tion of the tract. To attempt this, however, there is great danger of injury to the important connections with the testicle. In recent hernia the sac lying in front of the cord and easily isolated, there is little danger in enucleation unless there be firm adhesions. In cases of adhered sac the greatest danger is from such injury to the cord and vessels as will induce orchitis or a necrotic testicle. In the latter condition the frequent demand for castration would ever banish the popularity of the operation. It is patent however, if the operation is to come into general vogue, that great discretion should be observed in the selection of cases. Upon this custom will depend the popularity of the operation.

That this operation affords a means of permanent cure in every case I do not assert, but that, aside from the danger of the operation per se, which I deem slight, I consider it the surest means yet afforded by the many operations for the relief of this troublesome ailment. If the mortality can be kept as low as it now seems possible, I think it will at some near future day have a place with the strictly legitimate operations.

Of other operations for the radical cure of hernia Mr. Barton reports these cases in the Dublin Journal of Medical Sciences.

This he describes as the direct method. He makes an incision two inches in length from above downwards and inwards, its upper extremity corresponding to the internal ring. The fascia is carefully divided upon a director and when the internal ring is reached the index finger is introduced into the ring so as to completely prevent the descent of the hernia, and at the same time to regulate the next step of the operation, which is the introduction of the wire suture.

A curved needle with the eye close to the point is then passed through the inner pillar of the ring (care being taken not to introduee it too near the free edge) and

guided by the forefinger is safely carried accross the ring and through the outer pillar from behind forwards. A strong silver wire is then passed through the eye and the needle withdrawn. A second stitch is similarly passed. The finger is now withdrawn and the wire tightened, drawing the sides of the ring into close contact. When firmly secured by twisting, the cut ends are carefully bent down so as to lie in the axis of the wound and not project either forwards or backwards. Drainage is provided for by a few catgut threads and the wound dressed antiseptically. Two of Mr. Barton's cures were successful and the third ruptured again.

Another operation for the radical cure, that by injection, is better known in America than elsewhere. The operation is purely American. It consists in injecting by means of a syringe, a solution of quercus alba. In successful cases this causes an inflamatory exudation that obliterates the inguinal tract.

The only objection to this method is, that the operator is practically operating in the dark and liable to injure the peritoneum and cord. I believe it is necessary to use great care in the selection of cases, and that under the most favorable circumstances quite a percentage of the cases are a failure.

Dr. Lawson Tait of England has very recently advocated a new operation for the cure of hernia. It consists in laying open the tract, returning the sac, pressing the inner ring, and bring the parts together by deep suture. I am not aware that even Mr. Tait himself has made the operation.

In reviewing the merits of the different operations for the radical cure of hernia, I am convinced that with the present strides being made in abdominal surgery, the operation for extirpation of the sac will be successful in a larger percentage of cases, with no greater danger to life than by any of the numerous operations yet made.

HERNIA.

ST. PAUL, MINN., June 3rd, 1884.

Dear Doctor: Your letter of 22nd ult., with circular, I find on my desk, after a prolonged abscence.

Since my last report on cases of treatment of hernia, by Heaton's operation, which was published in the transactions of last year, I have had two new cases, and they both promise to be successful.

J. B., aged 20.—Had left inguinal hernia of four years' standing, being the size of a nickel and with firm edge. On Dec. 30th I made the usual method operation and kept him on his back for several days. On Jan. 3rd, fearing I had not excited sufficient irritation, I repeated the operation. It gave him very little pain, and he had no unpleasant symptoms. On Jan. 6th I let him get up, and two days after he returned to his home at Mankato. In a letter from him dated May 3rd, 1884, he says there has been no return of the rupture, and he feels perfectly sound.

Mr. S. G., aged 32—Strained himself blowing on a wind instrument, and brought on a rupture the size of a large thimble on the right side. Three days after, on March 14th, 1884, I made the usual injection and confined him to his bed for ten days. He still wears a bandage, but to-day, June 3rd, has no sign of any protrusion and the ring is closed. He claims to feel strong as ever there.

I have now made this operation twelve times with two failures, and I believe, ten cures, although some of the cases have passed from under my observation, and may possibly have had a return.

Considering the apparent abscence of danger in this operation, and the readiness with which it can be performed, I think it is a valuable aid in the treatment of hernia.

Yours truly, D. W. HAND.

TRACHEOTOMY.

BY DR. F. A. DUNSMOOR.

October 17, 1883, I was called in haste to see Sebo Thompson, aged 7 years. I found him suffering from diphtheretic croup, and so nearly asphyxiated that I made all possible haste to get a proper tube, and with the assistance of Drs. Abbott and Orton, rapidly made trachiotomy without an anæsthetic, the patient being so near death as not to fear the operation or feel its pain. Immediate relief from dyspnœa followed, but stimulants were requisite to restore vitality sufficient to allow absorption of food and medicines.

Through the kindness of the medical students at the College Hospital, I was able to secure relays of competent nurses from their numbers, and the little patient had an abundance of care so necessary after this operation.

The tube was cleansed very often, the inner tube being frequently sprayed with a weak solution of common salt. A steam atomizer moistened and medicated the air passing to the inflamed trachea, and an abundance of milk was given. After ten or twelve days the nursing was entrusted to the family, (Scandinavian).

The outer tube was occasionally removed for the purpose of allowing it to be thoroughly cleansed, but its re-insertion was immediately necessary, for the closing of the wound admitted only a little air through the larynx; and, indeed, for several days it was impossible to force in the smallest amount of air even by closing the wound, the boy nearly suffocating during the attempt.

Very slight improvement was made in the condition of the larynx, although patches had long since disappeared from the throat and the boy was running around the house.

At the end of two months the tube was left out about three hours; but, finding that it must be replaced, the attempt was made and the greatest difficulty encountered; and it was only after repeated trials and more than an hour's time that the trachea was forcibly dilated with forceps and the tube re-inserted.

A severe attack of tracheitis followed with high fever which was complicated with serious bronchitis, from which he has never fully recovered.

A month later the tube was changed with ease to one of much smaller calibre; but at no time since has there been sufficient space in the larynx to dispense with this tube.

The boy can say one or two words at a time, and not more when the tube is closed. His chest has gradually retracted just below the nipples until there is a saucer-shaped depression of each side, the lower ribs projecting outwards. This has occurred since the operation, as he was a remarkably sturdy little fellow with a handsome bust at that time.

Tube finally removed May 1st and patient not returned.

SYPHILIS.

October 31, 1882.—I was called to see J. H. with a sore the size of a quarter of a dollar at the peno-scrotal junction, and one one-half the size on the scrotum near the raphe, and there was considerable chafing between the legs and an inflamed surface under the prepuce. He confessed having had a chancre six weeks prior, and had been under treatment in St. Paul ever since that time. But the parts became so painful that he sent for me to come to him rather than to make the journey here, which would greatly add to his discomfort.

The discharge from the abraided surface was watery

and ichorous and all over the scrotum, inside of the thighs and up to the pubes. The skin was reddened to an erysipelas color and scaly, as in eczema. This condition of the skin spread rapidly in all directions until it covered every portion of the body. The conjunctiva was inflamed, iritis was present and every mucous surface cracked and bled. Scales dropped from the skin in such quantities as would scarcely be imagined: it certainly seemed to the amount of a pint daily, until every part of the cuticle had desquamated repeatedly. The surface beneath would crack and exude blood and serum in large quantities on one day and this would be repeated in an exaggerated manner the next.

The tongue became dry and furred, the nose began separating at the junction of the cartilage with the bone, and fissures opened where the ear joins the scalp.

He lost flesh rapidly, became partially comatose the last two days of his life and died the most rotten mass of human flesh I ever saw.

During the progress of the disease he was given heavy doses of mercury with occasional light doses of iodide of potassium; mercury hypodermically two or three times and rubbed on the thighs two or three times as an ointment.

He was daily given warm baths, being handled on a sheet, and would seem to part with the skin remaining upon his body. The feet and hands slipped out of their capsules like the removal of stockings or gloves, and no part of the surface escaped the loss. Then he was immediately dusted over with iodoform until the odor made his nurse sick, when carbolic acid and belladonna in a cosmoline dressing was substituted therefor.

The minor points in the history of the case are omitted; but it might be a matter of interest to state that during the spread of the inflammation of the skin the temperature ran as high as in eruptive fevers, reaching 104½° Fahr.

during the afternoon of a few days, but generally remained at about 101½° F.

This case is reported in response to a request from our worthy president.

F. A. D.

REPORT OF CHAS. BERRY.

NEW ULM, May 25th, 1884.

C. M. HUNTER, M.D.

Dear Doctor: In reply to yours of the 13th ultimo, I have to state, that in the line of general surgery, there is but little to report: a few dislocations, a somewhat limited number of fractures, and three amputations, two below and one above the knee, with a good recovery in each case.

The only case that may be of interest to the profession is one of exsection of the tibia in a little child nine years of age, the result illustrating in a marked manner the reparative effects of nature in such cases.

First saw this case on the morning of July 9th, 1883. There is no history of scrofula or syphilitic taint in the family. Patient male, aged nine years. Six months prior to the time at which the operation was performed, this boy, while at play, fell from the roof of an old shed or barn to the ground, a distance of nine or ten feet. After the fall he complained of pain in the right leg on walking, the suffering increasing until at the expiration of two weeks, he was confined to his bed. At this time a doctor was summoned, who diagnosed a bad sprain and administered treatment for such during the ensuing three months, but with no improvement. Surgical assistance was then discontinued, and, excepting the application of patent liniments, nothing further was done until I was called to see the case, at which time the leg was badly

swollen and œdematous, with a large piece of necrosed bone protruding through the soft tissues on the anterior portion of the leg, about midway from the ankle to the knee. The health of the patient being fairly good, the immediate removal of all dead bone was advised. Under the influence of ether and assisted by Doctors J. R. Foster and W. Wakefield, an exploratory incision was made along the anterior face of the tibia, from a point just below the ligamentum patellae, down to the lower epiphysis. On dissection of the soft tissues, it was found that the child had suffered from a *Green Stick Fracture*, implicating the whole of the middle third, a large portion of the upper third, and the lower third down to the epiphysis. The anterior portion of the periosteum was all destroyed. The whole tibial shaft was then removed, from the lower epiphysis up to and including a small portion of the insertion of the ligamentum patellae, the posterior and lateral portions of the periosteum being left intact. The carbolic spray was used during the operation, very close attention given to the most minute details and to cleanliness, and finally, the wound was dressed after Lister's method. There was but slight shock, the child rallying quickly from the anæsthetic; in two weeks he was sent to his home in the country, the wound having completely united.

At this time, May 25th, the child is in perfect health, walks without limping, and is free from pain. A new tibia has been formed, apparently as good as the original though somewhat larger and not quite as smooth, but equally as serviceable.

With sincere respect, I remain, my dear doctor,

Yours fraternally,

CHAS. BERRY.

HIP DISEASE.

THE SOLE-LEATHER SPLINT IN THE TREATMENT OF MORBUS COXARIUS.

C. H. HUNTER, M. D., Chairman Com. on Surgery:

I desire to present for the consideration of the Society and as topics for discussion, the following points in favor of the use of the sole-leather splint, or one made of some other material meeting the same indications, in the treatment of morbus coxarius:

1st.—That where synovitis exists with its usual attendant or resulting inflammation of tissues contiguous to or having part in the function of a joint, rest and entire freedom from motion is the most important part of the treatment, and that this can be more effectually secured by means of a molded investing splint than by extension by weight and pulley alone.

2d.—That, in the early stages of this disease a position of slight flexion and eversion of the leg relieves pressure within the joint, is good treatment and can be better accomplished by the molded splint than by means of straight extension alone, either by weight and pulley or in the wire cuirass.

3d.—That the sole-leather splint, properly made and applied, is more comfortable to the patient than any form of straight extension in the early stages of the disease, that it is lighter than the wire cuirass and does not necessarily confine the well leg.

4th.—That the sole-leather splint is readily available in domestic practice.

FRANKLIN STAPLES, M. D.

CASE OF CONGENITAL MALFORMATION.

BY DANIEL LEASURE, M. D.

On the 26th of November, 1883, I was called some miles into the country to visit a woman and her babe born the day before. I had attended the same woman in a previous labor two years before, and she was delivered of a healthy and well-formed male child.

On the present occasion she had a rapid labor and was delivered by the nurse, and I was sent for to see the child. I found a female child with both feet clubbed, combining both calcaneus and varus in each foot. The right knee was elephant-jointed, having no patella and bending forwards as well as backwards when manipulated. There was no bony joint in either hip, the thighs being attached to the pelvis by the soft parts only, and extensible in any and every direction outwards, up over the abdomen and up over the back as well as across over the opposite limb. The os coccygis was entirely wanting and the lower end of the sacrum was notched, and in that notch the anus opened apparently without any sphyncter, looking as if it had been punched by a blunt instrument. The third and fourth lumbar vertebræ were devoid of processes and were fissured for an inch and a quarter perpendicularly by a quarter of an inch in transverse diameter, through which the spinal membranes protruded, constituting a true lumbar spina bifida. The membranes enclosed about two ounces of the spinal liquor and were so much attenuated at one point as to render rupture imminent at any moment. The fluid was tinged with blood and the membranes were purple or deep red and there was no dermoid covering whatever over the central portion of the tumor. Otherwise the child from the cleft spine upwards was robust and very healthy and well developed.

It was a grave question for me to decide what was my duty in the treatment of this case. Most certainly, if I permitted the rupture of the membranous walls of the tumor, sudden death would occur accompanied by convulsions. At any rate, the child left to itself would follow the general rule of dying inside of two weeks. Was it at all a desirable thing that the child should live, even if I should, as on a previous occasion, successfully operate for the closure of the spinal fissure and the obliteration of the tumor? Here was a point of conscience that would not get out of the way and I must decide it at once. Granted, that I could save the life of the child, and that I successfully operated for its spina bifida, it would still be hopelessly helpless, for though the club feet might also be rectified, of what use would they be with no bony joint at the hip and no voluntary motion whatever of either limb; and if it should live to maturity and woman's life and woman's functions come upon it, what a sad possible fate might be in store for it?

Altogether, it was hard to decide whether to permit the child to die at once or save it for future possibilities. I decided to give it a chance for life, and applied strips of India rubber adhesive plaster after the method of strapping a swollen testicle, and that plan has been pursued till the present time. I saw the patient within the past fortnight and its general health is very good. It grows and thrives wonderfully. It is teething now at seven months, but without much constitutional disturbance. The tumor is about five inches in its transverse diameter by two and a half inches in its vertical diameter and two inches in depth from the spinal fissure to the posterior surface. It is hard and firm except in one spot an inch in diameter where the membranous covering seems quite thin. It is still without cuticular covering, and if the adhesive dressing were left off it would soon rupture and death ensue from the

discharge of the spinal liquor. There is not the least perceptible voluntary motion of the legs, which are plump and well developed as far as the knee and below that the muscles are small and illy defined, according to the general talipetic rule. Its general health is good and it is very bright and intelligent for its age; indeed, from the spinal fissure upwards, it is as perfect a specimen of a very healthy child as can be found anywhere.

LOST CATHETER.

The accompanying statement, or report of a case of a retained foreign body amongst the pelvic vescera, for a period of nine years, and through two successful pregnancies and parturitions, is so unique in its way that I have requested my friend and former partner in Alleghany, Pa., Dr. Jas. H. Christie, to permit me to place it before this Society. I was associated with him in the treatment of the case at the time the patient produced the abortion by the use of the instrument as detailed in Dr. Christie's report, and can bear witness to the gravity of the symptoms at that time, and how very near the case verged upon a fatal termination.

DANIEL LEASURE, M. D.,
St. Paul, Minn.

I was called to see Mrs. H. on the night of the twenty-ninth of July, 1874, and found her suffering from severe pelvic pain, with the uterus packed tightly into the floor of the pelvis with its mouth widely open and the entire organ extremely tender. She told me that she had been from three to four months pregnant, and that an abortion had been produced by passing a male silver catheter into the womb and turning it round, and that a piece about four

inches long had broken off, and that they could not find it. She said that the after-birth had come away during the preceding day, and the husband had burned it in a small stove that was in the room. There being a small quantity of ashes in the stove I examined them carefully, but could find no remains of the catheter. By curving a Simpson's sound I examined the interior surface of the uterus, but could not detect it in its walls, but found that the placenta had been attached on the left side and posterior surface low down, and supposed that the catheter had passed between the placenta and the uterine wall, and breaking off in that position had been forced through the wall of the womb, (probably through a sinus) by its contractions into the peritoneal cavity. I did not see the remaining piece of the catheter as it had been carried away by the owner.

It was followed by most violent general peritonitis, and required constant attendance for more than a month. I have never before or since seen so bad a case recover, but for months after being able to be about she complained of uneasiness in the left side extending down to the groin and for several years said that over exertion gave a feeling of something pushing there. Other than this she enjoyed good health. I attended her in confinement April 14, 1878, from which she made a good recovery, and again in July, 1880, with a like result. In April, 1883, I was sent for to see her and found her with retroversion of the womb, which I replaced. They had moved and the woman had caused her trouble by over-lifting in trying to get her house in order. About ten days after this last call the husband came to see me saying his wife had got into trouble again, that she was perfectly well after I had replaced the womb until a few hours before, that in walking across the room she had sneezed suddenly and violently and at the time was taken with sharp pain in her side and supposed she had upset her womb

again. As she was unwell at the time I sent her an opiate, told her husband to keep her in bed and let me know as soon as her sickness was over. I saw her in a couple of days and found her suffering great pain in the abdomen, with a swelling extending from the left groin past the median line half way between the pubic bone and umbilicus. It was extremely painful and tender to the touch, seeming like a roll as large as my arm. I examined her as carefully as I could, but could neither make out distinctly what it was or what caused it. I judged that there was going to be an abcess, and told them to apply hot flax-seed meal poultices and gave her sulphide of calcium and sufficient opium to relieve her pain, saying I would be back in a couple of days. On my return I found apparently but little change, the end of the swelling extending a little further to the right, the circumference being a little less and not quite so painful to the touch; in feeling over the surface of it I found a little cup-like spot that would just admit the point of my index finger, and could just touch something that I judged to be the open end of the long-lost catheter. I went back the next day taking Dr. McCann with me, having given him a history of the case. At the spot spoken of I found the skin pushed up and on making an incision over it I withdrew the piece of catheter, the broken end coming first, and squeezed out some offensive pus, and dressed the wound with iodoform and a light poultice. In four or five days she had fully recovered. The catheter was a No. 7 English, (silver), and a fraction less than seven inches long. It was but little corroded, and gave a strong proof of the inoccuousness of silver lodged in the human body.

J. H. CHRISTIE.

WOUND OF LEFT LUNG: AN EXTRAORDINARY CASE.

BY L. E. HOLMES, M.D.

Patrick M., a miner, aged 31, was brought to the Working Men's Hospital, Butte City, Montana Territory, on June 18th, 1881, on account of a wound made by the passage of a drill through his left lung. The history of the accident is as follows: While standing with two other miners at the bottom of a mining shaft 225 feet in depth, on the "Gray Rock" mining claim, a drill three feet one inch in length, one inch and a quarter in diameter at the bit, and weighing eight pounds and a half, fell from the top of the shaft. The men below heard it striking the timbers from side to side as it came down, and two of them jumped aside to the corners of the shaft, while the patient stood still with his shoulders slightly dropped forwards. The bit of the drill struck him between the superior angle of the left scapula and the spine, about two inches from the latter, passing downwards and forwards near the left border of the heart, and emerging at a point on a line with the nipple, and six inches from the center of the sternum, fracturing the sixth rib, making a wound eight inches and a half in length. The drill passed nearly through the body, the head seeming to the man to remain in the region of the left armpit; the point emerging struck the ground, bringing the man to the ground upon his face. The patient called upon one of the men standing near him to assist in drawing out the head of the drill, and both pulling together succeeded in doing so. The head was much battered and must have torn the lung and flesh considerably in passing through.

On entering the hospital the patient was bleeding freely and in a fainting condition. Air at each expiration

passed with a gush of blood from both ends of the wound. Hæmostatics, consisting of gallic acid and ergot, with stimulants, were freely administered, and the openings temporarily sealed. The bleeding ceased rapidly, but the patient recovered slowly from the shock. The mining shaft is about one fourth of a mile from the hospital, to which the man was brought in a wagon after being raised from the bottom; the amount of blood lost must have been considerable.

On the 4th of July, sixteen days after the injury, he walked out from the hospital to see the patriotic demonstrations of the citizens. He remained in hospital eight weeks, when he considered himself sufficiently recovered to go to his private boarding house to remain. The wound or wounds, for there were two open ends, began to discharge matter on the fourth or fifth day, which was very offensive and became very abundant. For three or four days, once a day, injections of carbolic acid (ten drops to the ounce) were made through the track of the wound with a common Davidson's syringe. These, though apparently much needed, feeling disagreeable to the patient, were discontinued, and simple dressings used once or twice daily. The offensive character of the pus soon changed, though the abundance continued for several weeks.

The lung has shrunken to about two-thirds its natural size. The respiration at the time of leaving the hospital was 28 and the pulse 90. The wounds ceased to discharge Aug. 31st, and were closed, except the lower one, which with no perceptible opening merely moistened the dressings during the night. After leaving the hospital the patient gained rapidly in strength and flesh, and soon called himself as strong as ever. There was never any marked pleurisy and no great amount of fever at any time. The patient, in about two months after leaving the hospital, commenced work again in the mines, but soon found his strength uneqal to the task, and quit. He then

went East to relatives and friends, where he has been apparently stout and well. I have heard of him to-day (June 26th, 1884) from one of his old employers in the mine, who tells me that he is still stout and well.

I have reported this case more on account of its extraordinary character, showing what astonishing injuries the system may sometimes survive, than for any particular surgical interest it contains.

EMPYEMA.

BY A. B. CATES, M. D.

DR. C. H. HUNTER, Minneapolis.

Allow me to briefly report four cases of empyema successfully operated upon during the past year.

Case 1.—The first case is that of Mary S. who was attacked on March 30, 1883, with an acute pleurisy of left side while living in Stillwater. She was attended by Dr. Clark who informs me that a week later she developed also a pneumonia on the same side. She was removed to the City Hospital on April 16, where she remained till May 29. Meantime an effusion in left chest had taken place as was evident from pain in the left side and extending to the shoulder. Marked dyspnœa, slight chills with fever and the usual physical signs of dullness, bulging, diminished vocal fremitus and respiratory murmur. Aspiration was proposed by Dr. Clark but was refused. On June 26 I first saw her when she applied for admission to the Minnesota College Hospital. The house surgeon gained a brief history. Mary S., German girl, age 22. Father died of consumption. She gives a history of more or less cough during the past two years. Chest symptoms were such as have already been mentioned. No menstruation

during past four months. She has also had headache with fever and debilitating night sweats. Now has a severe diarrhœa; cough slight, can speak only a few words at a time. Physical examination show patient to be very anæmic and emaciated. Flatness extends over whole of left chest. Intercostal spaces are bulging. The heart is displaced downwards and to the right, and its sounds are obscured. At the time of her admission her pulse was 152, respiration 60, temperature 104.

It was evident that whatever was to be done should be done quickly. Aspiration revealed the presence of pus. Immediately without etherization an incision was made in the eighth intercostal space in the axillary line. A whole wash bowl of pus was removed. A large drainage tube was inserted and fastened by a safety pin. The incision and dressing were made under the carbolic spray. A Lister dressing was applied consisting of carbolized gauze and Mackintosh. These were kept in place by the ordinary roller bandage and an elastic bandage at the borders of the dressing. From the date of the operation there was a marked improvement. The temperature almost never went above 99° F. and the pulse ranged from 90 to 104.

On July 7th examination showed resonance and respiratory murmur over nearly whole of left lung. Discharge from the wound slight and of good odor. Under the influence of a tonic the appetite and strength and flesh were improved. The wound was dressed twice a week and the cavity was syringed out with a mild solution of carbolic acid. By the middle of July patient was able to be up and dressed. The discharge however continued always very slight and the patient was not discharged from the hospital till October 30th, when she appeared entirely well.

Case 2.—Carl P., a German, age 27, married, and a moulder by trade. Family history good. He was admitted to the Minnesota College Hospital on February 27, 1884, when he first came under my care. Had always

been healthy up to the time of present attack. Fifteen weeks before this he had first noticed pain in left side accompanied by slight cough but no expectoration. Ten weeks before he had entered a hospital in St. Paul where he received some internal treatment and was discharged at the end of two weeks. About two weeks before admission to the hospital in Minneapolis an opening had been made by his attending physician in the sixth intercostal space just in front of the axillary line. From this at the time of his admission there flowed a slight discharge of very offensive pus. No drainage tube was in the wound, and, on account of the man's surroundings and financial status, it had not been feasible to carry out antiseptic precautions. Dullness extended over the whole left chest and the heart was displaced, the apex beat being felt to the right of the sernum in the fourth intercostal space. Under ether the old incision in the sixth intercostal space was extended and another incision was made in the eighth space. A large drainage tube was passed in and extended from one opening to the other. Strict antisepsis was adhered to. The case was immediately changed from one of grave to most favorable prognosis. The dressings were changed as in the previous case and as the lung extended two small tubes took the place of the one large tube. The appetite became inordinate and the man gained flesh rapidly. On May 26th the discharge had ceased and the openings were completely closed. Air entered all portions of the lung. There was still some dullness from the pleural thickening.

Case 3.—John B., an Irish laborer, about 50 years of age, was admitted to the hospital on November 19, 1883. On account of the loss of some of the notes in his case it is impossible to give his full history. When admitted he was suffering from severe pain in the right side. Absolute flatness to the level of the fifth rib on right side, tubular

respiration over this area and intercostal bulging were the signs in the chest.

An attempt was made to aspirate. A small amount of bloody fluid was withdrawn when the needle became clogged with lymph. This was repeated at another point. A sanguineous effusion being present and perhaps on the increase it was thought best to make no permanent opening.

On December 28th I found that patient had had mental aberrations for several days, that he lay in quite a weak condition and that bed-sores had formed. The effusion had increased until the liver was pressed down 4–5 inches below lower rib. I again aspirated and still found the same bloody fluid.

During the month of January it is recorded that the pulse was weak and very irregular. The rate on several occasions descended to 40. Sputa were streaked with blood.

During the month of February he sat up on several days. A small superficial abscess developed from the old puncture. This was opened.

In March the liver was pushed down deep in the abdominal cavity, and so having ascertained the presence of pus, under ether incisions of about one inch in length were made in the seventh and ninth intercostal spaces and a one-half inch drainage tube inserted. About 3 quarts of pus were evacuated. The cavity was thoroughly irrigated with a 2½ % solution of carbolic acid.

The patient from a very weak condition has gradually gained and now weighs 40 lbs. more than when admitted to the hospital. One opening is completely closed and a small tube remains in the other from which there is still a slight amount of discharge. Air enters the whole lung, the liver is in its normal position. Dullness still exists, caused by the thickened pleura. For an injection we now use corrosive sublimate 1 to 3000.

Case 4.—A Swede had typhoid fever according to his attending physician. His recovery was slow. When I examined him I found unmistakable signs of effusion on the right side. The next day I aspirated and drew off about three ounces of very fetid pus. He refused to allow any further operation. The next day he began to cough up the same stinking pus. His recovery was rapid. I saw him only once after aspirating.

The points which I would insist upon from my experience with empyema would be: never waste time with aspirating after pus has been discovered. Never delay making a permanent opening until the lung has become a fibrous mass; for these are the cases which are more likely to prove fatal. Two openings allow much more thorough drainage. Above all operate and dress antiseptically. The antiseptic dressing allows only carbolized air to enter. After rendering the cavity antiseptic and getting healthy pus use mild solutions such as a very weak solution of carbolic acid, boracic acid, corrosive sublimate or best of all chlorinated soda. A strong solution of carbolic acid only increases the discharge and could this have been carefully regulated in all these cases the patients could probably have been discharged earlier. I lay special stress upon the use of antiseptics because during the past year I have seen two unfortunates suffering with empyema the stench from whom was almost intolerable. They both lost their lives. Had strict antisepsis been employed I believe the result would have been far different. Economy in dressings is no excuse for loss of lives.

CASE OF EXTENSIVE INJURY TO THE HEAD, ENDING IN RECOVERY.

Ledette L., aged 12, while ascending on the elevator in the Pillsbury A mill, May 19, 1883, had his head caught between the elevator and the ceiling above, the chin resting on the elevator railing and the back of the head coming in contact with the beam of the ceiling. The elevator was stopped, the belt slipping from the pulley. His head was forced, it was said, into a place an inch and a half wide. Force was exerted sufficient to leave the marks of chin and teeth on the ash rail. The eyes were said to protrude on the cheeks.

He was brought at once to the hospital where I found him conscious, not apparently suffering much and bleeding profusely from mouth and nose and a large scalp wound. This wound was about eight inches long from ear to ear over the posterior part of the crown, the flap hanging down over the neck; 2 in. of the occipital bone was denuded of periosteum. The whole lower face was flattened from before backward. The nasal bones were firmly wedged backward into adjacent bones. The alveolar processes of the sup. max., if not some of the body, were moveable and in three pieces by two vertical fractures near the canine of either side. An incisor or two had dropped out. The left coronoid process of the inferior maxillary protruded through the center of the cheek, was fractured and the ramus denuded of periosteum. Through the opening the finger could be passed into the glenoid fossa over the condyle of inferior maxillary. The tongue, about an inch from the tip, was cut completely through obliquely across for about two-thirds of its width.

With the help of Dr. Simpson and the internes the scalp was cleansed of flour dust and put in place with the interrupted silk suture, drainage being provided for by a coun-

ter opening in the flap at the nape of the neck. The wound in the tongue was closed with silk sutures by sewing from within outward. The fragments of the coronoid processes were removed, the protruding rear sharp edge snipped off with the forceps and the wouud in cheek closed except for a drainage tube. The wounds were covered with carbolized gauze. The patient now returning to a sense of pain and well tired out, was put to bed, given a dose of chloral and mild opiate.

The subsequent history of this case would be lengthy to give all details. Suffice it to say that, notwithstanding the evident squeezing, there were no pain symptoms. There was a moderate discharge of pus from numerous sources, among others the left ear. The scalp wound suppurated only in a small part of its extent. The wound in the cheek healed kindly at first. It was a difficult problem to keep the fragments of the superior maxillary in place on account of the scalp injury and the mobility of the inferior maxillary. It was finally done passing well by moulding dentists' wax between the jaws on the right side. The wound in tongue healed kindly. There was evidently a great deal of injury to the small bones of the face from the long-continued suppuration from the nasal passages and sockets of the teeth and from the number of splinters of bones removed, no less than 33 coming away by various channels, the largest of which was the inferior turbinated of the left side. The loosened canine were removed when injections through their sockets returned through the nose laden with pus. Abscesses formed at outer angle of left eye and over right malar, but healed quickly when opened. An abscess of longer duration formed at left angle of inferior maxillary, finally opening downward in submaxillary region and forward by cut in the cheek. The openings of this abscess left permanent fistulæ leading to the rear ramus which only closed permanently after scraping the ramus this spring, a year after

the receipt of the injury. The scars from these fistulæ have been greatly improved in appearance by loosening them from their deep attachments and carefully stitching the edges.

The face retains its flattened appearance. The hearing of the left ear is affected, the tympanum being displaced and adherent. The fauces are narrowed, the teeth many of them gone, the rest rapidly decaying, the enamel whiting and crumbling away.

The lessons specially enforced by this case are the value of the inter-maxillary splint, of wax in fractures of the superior maxillary, and the necessity of unremitting attention, cleanliness in suppuration of closed cavities like the antra, and not to be too officious in opening abscesses.

FRACTURE.

SANTA ROSA, CALIFORNIA, May 20th, 1884.

C. H. HUNTER, M.D., Chairman Surgical Committee, Minnesota State Medical Society, Minneapolis.

Dear Doctor: Your circular of the 13th inst. has been received, and in compliance with your request will report from memory, assisted by notes, the following case:

July 12th, 1883, Charles Davis, 9 years old, nervous temperament, flabby muscles, and small bones, in attempting to regain his kite from the roof of a one-story restaurant building, slipped and fell upon the sidewalk below, a distance of about 15 feet, sustaining a Colles' fracture of both arms, accompanied with a dislocation of the ulna-carpal articulation, left side, and an oblique fracture of the femur near the junction of the upper and middle third, right side.

The shock occasioned by the fall was so great that the boy could not speak intelligently of his injuries or how

they were received; the first were ascertained by examination and the latter from those who saw him before, during, and after the fall.

After adjusting the fractures and restoring the ulna-carpal articulation, Bond's splints, made to fit and suitably padded, were used during the first three weeks, in treating the upper extremities. The fracture of the femur came so near being compound that for several days the mechanical treatment consisted alone of the weight and pulley, and the limb and body supported by sand bags; three being used, one extending from the foot to the crotch, and one on either side extending from the feet two-thirds up the body, secured by strips of cotton cloth passed under the body and legs, and fastened to the sand bags, rendered necessary to keep him in position, he being very restless, and for about a week opium was exhibited to lessen the pain. The upper fragment of the fractured femur was drawn upwards and outwards, and was slow in taking its place in line with the lower fragment, requiring the application of a compress sustained by splints and bandages, as soon as the condition of the soft parts would admit of it. The fractured ulna united readily and perfectly, but the femur slowly and feebly, notwithstanding due attention was given to nourishment and mechanical bone-making material. At the end of about six weeks a starch bandage was applied from toes to pelvis, and the patient taken into the open air as much as circumstances permitted. In the course of about a month the starch bandage was removed and afterwards adjusted to the thigh only, secured by strips of cotton cloth and a pelvic bandage. About the last of October, the fracture having apparently united sufficiently strongly to justify it, and the general health having come up reasonably well, the patient was directed to commence walking with the assistance of crutches, and accompanied by his mother. At that time the most careful measurement revealed less

than half an inch shortening; and considering my work done, and congratulating myself upon the result, the case was discharged; but, I am sorry to say, did not remain discharged. In about six weeks from that time, or about five months from the date of fracture, the boy was brought to our office by his mother, saying that she had that day discovered "a lump" on his thigh. Upon examinrtion, I found quite a prominence at the union of the fracture on a line drawn from the anterior superior spine of the illium to the outer border of the patella, the result of an imperfect osseous union, permitting the upper and lower fragments to form an obtuse angle. Measurement now gives almost one-and-a-half inches shortening. Finding that by pressure I could diminish the prominence and partly restore the length of the leg, applied an apparatus made of heavy leather with straps and buckles, padded to fit the part to which it was applied, and yet bring sufficient pressure to bear upon the prominence. By adjusting the apparatus from time to time as occasion required, and using a crutch to relieve the leg of the greater portion of the weight of the body, a gain of half an inch was made in the length in a few weeks and has continued to the present. The leg is now seven-eights of an inch shorter than the other. The union was not strictly ligamentous, but failed to have the requisite amount of earthy material, nature having seemingly exhausted herself in the repair of the upper extremities.

Had I been fully aware of the feebleness of the union of the fragments of the femur, and enjoined a longer continuance of the adjustable starch bandage, I believe the boy's recovery would now be almost perfect, but as it is, I have more than an average result, taking the case in all its bearings.

Yours truly,

A. B. STUART.

Report of Committee on Obstetrics.

T. C. CLARK, M.D., CHAIRMAN.

Mr. President and Members of the State Society:

Your Obstetrical Committee, through their Chairman, would respectfully report that they forwarded to each member of the Society a circular, inviting short papers on topics of especial interest to the writer, hoping by this latitude to secure several valuable monographs from the members.

We regret to say that to this request but two gentlemen responded: Dr. Rosser, of Brainerd, and Dr. Woodling, of Minneapolis, whose papers are incorporated in this report, and to whom the Committee return thanks for their favors.

Anticipating this result somewhat, from an innovation on the time-honored custom of case reporting, and in order to provide something for your consideration and discussion your Committee incorporated in their circular a few queries in regard to the use of ergot, opiates and anæsthetics in labor, not so much with the idea of developing anything new, as to determine as far as possible with regard to the uniformity of opinion and practice among the profession of this State, in the use of these agents, deeming it important that such views as receive the concurrence of a *majority* of the profession here and elsewhere be set forth, in order to invite discussion and secure uniform adoption if possible.

Replies to our circular have been received from some twelve or fifteen members of the Society, but not enough

to make the summary of them in regard to our queries of as representative a character as we desired.

Especially is this true in regard to the use of ergot. Nearly all answers received to the question, "In what conditions do you advise the use of ergot?" indicate its use and efficacy in placenta prævia, post-partum hemorrhage, and in uterine inertia, where the os is well dilated, and no mechanical obstacle to delivery exists; but show the greatest diversity in regard to its use otherwise —from the member who "invariably gives a teaspoonful of the fld. ex. just before the termination of the second stage, to prevent post-partum hemorrhage and secure contraction of the uterus," to the gentleman who writes, "Regarding the efficacy of ergot, I have grown so sceptical, that I hardly know what advice to offer. Before the placenta is delivered, I have never given it, more because my teachings are against it than for any other reason. It is my custom to give it following the delivery of the placenta, simply to lose no chance to ensure contraction."

An esteemed member replies, "Never use ergot until after the first stage of labor; the uterus should always be in a dilated or dilatable condition. Consider it good practise to give a teaspoonful of fld. ex. shortly before termination of second stage, to ensure placental expulsion, which, with proper observance of 'Crede's' method, will empty uterus of its contents and prevent undue hemorrhage."

Another "does not think it proper to give it for retention of placenta."

Some three or four recommend its use for "afterpains;" a gentleman of large experience using the following formula: f. e. ergot, 1 oz.; eli. opi. et ipecac, eli. simp., each ½ oz.; aqua, 1 oz.; dose, a teaspoonful every hour or two. This he finds "works like a charm."

One answer states that the writer believes "that the incautious use of ergot is frequently productive of irregu-

larity in the uterine contractions, commonly known as the 'hour-glass contraction;'" while a valued member of this Society states emphatically that "the injudicious use of ergot is a frequent cause of laceration of cervix and perineum. It should be used with great caution, especially in primipara." We hope that the opinion of this writer will elicit the views of those present to-day upon this point.

Two have noticed injury to the mother, in what form is not stated; and one, injury resulting to the child.

The following case illustrates its use, or rather abuse, in the hands of the ignorant midwife, and is an argument in favor of State supervision over this, at present, dangerous class of persons:

The doctor says: "I was called in great haste on the 27th of last February to see Mrs. K. The husband, who came after me, stated that his wife had been in labor for nearly eight hours; that the pains had been terrible, and that in consequence the head had come nearly into the world, but the pains had ceased and the head gone back. Upon reaching the house, I found an old woman in attendance, a neighbor and with some reputation as a midwife. The pains had recommenced just before my arrival, and the cause was apparent when I noticed upon the table a two-ounce vial of fld. ex. ergot, from which the old woman had given the patient, during the four hours previous, six teaspoonfuls, one of them a short time before my arrival. Although the pains were so severe as to force down the whole body of the uterus, yet upon examination I found, strange to say, the os undilated and womb unruptured, and gestation lacking about a month of completion. A full dose of morphine soon quieted the patient, who was delivered a month later of a living and healthy child. The old woman stated that she was in the habit of giving ergot to the women she attended when the pains were not strong enough."

In the face of this history, and with the knowledge that this is but a sample of what is daily taking place among ignorant and incompetent (so called) midwives, and also in view of the fact that in the hands of the profession it is not without its accidents according to the testimony of one of our correspondents, we come to the conclusion that ergot is an agent to be used with great caution in labor—reserved for emergencies rather than for use in every day obstetrical practice, the testimony of those using it as a prophylactic measure being negative rather than positive in its favor.

I quote further from this paper of a gentleman who gives it as a rule after the delivery of the placenta to secure contraction: "Although in not a few cases I have omitted it, always with results entirely satisfactory to the patient and myself, securing contraction and retraction by the simple process of kneading."

As a relaxing agent to favor dilatation, morphine divides the honors with belladonna, hot water injections and chloral hydrate; four responding in favor of each one of these agents.

Hydrate of chloral is attracting considerable attention in obstetrical practice at present, chiefly because its after effects are not so disagreeable to the mother as those produced by morphine; nor is there as much danger to the child as from the use of the latter drug, of which Dr. Hand writes: "I have seen children die from the effects of morphine or opium given during labor."

*Lyman tells us that "chloral hydrate is exceedingly useful as a means of relieving the irregular reflex contractions and the irritations which often accompany the first and second stages of parturition. Given in doses of one gramme every twenty minutes until three or four doses have been administered, the patient will often pass into a condition of refreshing sleep, which may continue for sev-

*Artificial anaesthesia and anaesthetics, page 272.

eral hours. Uterine pains are not thus abolished, they are made endurable.

"Sometimes the patient sleeps in spite of the contractions of the womb; in other cases she may be aroused by the pain and again fall asleep as soon as it has ceased. By this method the vigor of the patient is preserved and the constant attention of the physician, which is imperative during inhalations of chloroform, is rendered unnecessary. If any of the greater operations of obstetrics are required, chloroform or ether are more convenient than chloral for the induction of artificial anæsthesia. The after pains which so often torment the mother after confinement may be greatly relieved if not altogether abolished by the administration of chloral."

The replies to the queries in regard to the use of anæsthetics present more unanimity of opinion. All but two are emphatic in the opinion that chloroform is the obstetrical anæsthetic *par excellence.*

Dr. D. F. Brookes prefers ether as being the safer to use.

Dr. F. E. Brissell uses a mixture of one-third chloroform to two-thirds ether. The Dr. reports having used bromide of ethyl a few times, not a sufficient number to express an opinion regarding its merits as an anæsthetic however.

Dr. A. B. Ancker writes, "with bromide of ethyl I have had absolutely no experience. If I remember rightly it was tried quite extensively in Philadelphia a few years ago. Death followed death until the trustees of one of the leading hospitals forbade its use."

It is due this anæthetic, that it be stated that in the death from its use, reported by Dr. J. Marion Sims, upon analysis the specimen used was found to be impure, and it is in the difficulty of obtaining it in a pure state, that one of the principal objections to its use is found. Since the period spoken of by Dr. Ancker, its use has been

revived, and with a better understanding of its properties and action, with marked success. Its use in labor, especially just at the completion of the second stage, was suggested by the rapidity of its action and its transient effects. By administering it freely at the outset, anæsthesia may be produced very rapidly. Sensibility and consciousness return with great rapidity owing to the great volatility of the liquid.

Dr. A. J. Murdock has noticed that anæsthesia often arrests the uterine contractions in the first stage.

Dr. W. C. Eustis: one case in which chloroform arrested contraction for two hours, every time it was administered.

Dr. Wharton: "But little effect in retarding uterine action."

Dr. Hand has never seen it stop the uterine contraction completely.

Dr. A. B. Ancker: "I certainly have never observed any cessation of labor pains, but rather an increase in their potency, following the administration of an anæsthetic. It is a rule with me, subject to exceptions of course, to administer an anæsthetic when exhaustion is apparent, that is, when the pains are overtaxing the patient's strength, and time and time again have I satisfied myself that under its influence the labor progressed more quickly, the patient obtained more perfect rest between the pains, and the contractions were much more powerful when they did come. The most instructive case of distension of the perineum I ever saw, occurred with full regular pains during profound anæsthesia."

The balance of opinion is against the retarding effect of anæsthics in labor, when not administered in excess.

Dr. Talbot Jones' reply is so concise, and summarizes the conditions for its use and non-use so thoroughly, that I incorporate it:

"The best anæsthetic in labor is, I think, under ordin-

ary circumstances, chloroform. Why it is that women in childbed enjoy such an immunity from accidents when this anæsthetic is administered has never been satisfactorily explained: yet it is real, as a vast clinical experience attests. Accidents, however, do sometimes occur, which shows that this exception is not absolute. Chloroform commends itself on account of its safety; the ease with which it is administered; its pleasant odor; the rapidity of its action, and its being more manageable. In its administration anæsthesia and not narcosis should be arrived at. I have been led to believe the following propositions are true:

"1st. Chloroform should not be given in the first stage of labor, on account of its tendency to produce uterine inertia.

"2nd. If the pains in the second stage be feeble it should be withheld, if they be strong it should not be given to produce complete unconsciousness.

"3rd. It should not be given during the intervals of pain, but just as the pain comes on the patient should be directed to take several deep inspirations.

"4th. It is only when the child's head rests in the perineum and begins to emerge from the vulva that chloroform should be entrusted to the nurse; at all other times it should be entirely in the hands of the physician.

"5th. Chloroform should not be given in the third stage of labor.

"6th. A tedious labor, due to uterine inertia, contra-indicates its use.

"7th. It should never be given to a woman who has a tendency to flood during every confinement.

"8th. In general anemia, especially central anemia, and in women with relaxed muscular fibre, it should not be given, unless the necessity for it be urgent.

"9th. A fatty heart or weak cardiac wall or an aneurism contra-indicates its employment.

abroad during the past year, than any other which has been brought before them—I refer to puerperal fever and in connection with it, antiseptic midwifery.

Without entering at all into the discussion of the ætiology or pathology of puerperal fever, or citing the arguments for or against prophylactic antisepsis during the lying-in period, so ably set forth by the eminent members of the New York Academy of Medicine.—I think that the judgment of those who have given the subject careful consideration, will endorse the following propositions:

1st.—The necessity for strict observance of antiseptic cleanliness during the puerperal state.

2nd.—Non-interference during the normal puerpal period.

3d.—Antiseptic vaginal and intra-uterine injections upon evidence of septic poisoning.

4th.—Immediate closure of a lacerated perineum and antiseptic dressing for all external wounds and abrasures.

Striking testimony to the value of antiseptic cleanliness is given in the report of Dr. Lombard (Boston Medical and Surgical Journal) on "German lying-in institutions."

"Before Semmelweis introduced his order for disinfection of hands, instruments, etc., with chlorate of lime, the mortality from puerperal fever in Vienna averaged 6.2 per cent. in forty-five years, reaching 15 per cent. in 1842. Since that time it has never risen above two per cent., except from 1852 to 1857, when disinfection was abandoned and the death rate rose to 9 per cent. More recently it has been reduced to 0.75 per cent. At Prague the death rate has been reduced from an average of 6.67 per cent. to an average of 0.77 per cent., the rate being during the past two years 0.24 per cent. The treatment is simply the utmost precaution to prevent infection before, during and after labor, iodoform and carbolized injections only being used at the lying-in period in abnormal cases, as when decomposition of lochia et al. indicates them."

The traumatism of the process of parturition has of late attracted the attention of the profession to the necessity of applying the principles of modern surgery to the after-treatment of the parturient woman as far as possible. Rest being one of the most important of these, and applying it to the case before us, we infer that after labor is completed, all abrasions or lacerations attended to, the patient antiseptically cleansed, she should then be left undisturbed by unnecessary prophylactic injections unless the lochia becomes offensive, or constitutional disturbance supervenes, in which case our third proposition becomes a necessity.

A paragraph in the annual address of Henry Gervais, M.D., President of the Obstetrical Society of London, states very clearly the importance of immediate attention to the perineum and genital tract, upon the conclusion of labor. He says:

"Without presuming now to enter upon this great subject, which includes the consideration of antiseptic details both before, during, and at the close of labor, there are just one or two not unimportant points which, taking advantage of my occupation of this chair, I should like to refer to as worthy of uniform attention. And the first is the systematic careful examination of the vaginal entrance at the conclusion of a labor. In the course of the year it is one's lot to see many cases of illness following delivery. In a very large proportion these cases are septic in character, and in many, when one asks, "Is the perineum all right?" the answer evinces that the matter has not been thought of as coming within the range of a necessary investigation. On looking, however, at the perineum, with very few exceptions, at or within its margin, or at the vaginal entrance, or on or about the vestibule, we find circumscribed sloughy patches, of greater or less extent, evidently corresponding with lacerations, trifling or even considerable, in the mucous surface of the genital tract,

lacerations that very possibly are quite unavoidable, and which early attention with antiseptic dressing might have rendered harmless, instead of leaving them to become, as too often is the case, channels of entrance for septic matter. The importance of early surgical attention to a torn perineum adds further emphasis to the desirability of the inspection which I urge. And in addition to this double advantage I would in passing note that I have known several cases where the fact of a perineal tear not having been ascertained at the time of the confinement has led to much unpleasant subsequent correspondence and even legal proceedings. Equally, therefore, from the medical, surgical and social points of view, the careful examination of the outlet of the genital canal at the termination of every labor is a matter I would press as a duty of uniform importance."

Although private practice does not call for the precautions necessary in crowded unsanitary hospitals, still I think that we must come to the conclusion that strict cleanliness in all normal labors, and thorough antiseptic treatment of all abnormal ones, will be a step in the right direction towards reducing the mortality from puerperal complications.

In accordance with the suggestion of our retiring President, as Chairman of this section at our last meeting, we invited reports upon the treatment of puerperal septicemia by constant irrigation of the uterus. As but three members have replied to this query, and but one of these advocates its use, we infer that this method of treatment has met with but little favor with the profession in the State.

Dr. A. J. Murdock writes: "I have no cases to report in detail of puerperal septicemia treated by constant irrigation, but that plan of treatment has been the one I have used for years, with almost uniform success. I have used a common syringe instead of the fountain, and a double canula unless the os was well dilated."

Dr. E. J. Davis, Mankato: "I do not recall just now what Dr. Jones used for the malady mentioned. It has been my practice for several years to use in nearly all my obstetrical cases, especially in primipara, a vaginal wash, consisting of about a teaspoonful of sod. bi-carb. in a half pint of soft tepid water.

We use enough of this wash, two or three times every twenty-four hours, to thoroughly cleanse out the vagina, always beginning within twenty-four hours after parturition, and continuing its use generally for a week or as long as there are indications for it. This course is adopted in the management of our cases as a preventative measure, and we have become of the belief that it is an important factor in preventing puerperal septicemia, and when it does occur, this mode of management greatly modifies at least its severity."

Dr. Talbot Jones of St. Paul writes: "I have had but one additional case since the last meeting of our Society—making three in all that I have treated by irrigation. As the clinical histories of each case, together with the manner of performing the operation, were somewhat fully explained by me in the New York *Medical Record*, January 12, 1884, it will not be necessary to allude to this part of the subject. I was originally induced to resort to this method of treatment after reading of its succcsses in articles translated from German medical journals.

"Irrigation is now largely in vogue in Germany, Austria and Italy, and the statistics would indicate that conspicuous success often attends it. It cannot be denied that strong arguments can be urged in its favor, but I believe that stronger arguments still can be urged against it. I am therefore frank to admit that my own views as to the advisability of resorting to it have recently undergone a change and I should now hesitate to practice it.

"While irrigation is advocated by Langenbach, Schroeder, Richter, Schulin and Fritsch in Germany, Fasola in

Italy, and others equally prominent elsewhere, the great preponderance of opinion is against it; and, after the recent full discussion of the whole subject of puerperal septicemia before the New York Academy of Medicine, an unprejudiced person must inevitably arrive at the conclusion that other methods of treatment are less dangerous, if not more successful.

"In everything experience is more valuable than "precept" remarks Quintilian—in medicine as well as in metaphysics; and, while the treatment by irrigation with an antiseptic fluid of the septic uterine cavity, appeals strongly to our common sense as a fit and proper one, still clinical experience does not wholly sanction it.

"I am now, and always shall be, of the opinion that the lives of my three patients were saved by the treatment adopted, but as the number is too small to be of value in drawing deductions; and, as the general sentiment amongst those best qualified to judge, is opposed to irrigation, I shall not again resort to it unless the necessity for it be imperative."

REPORT OF F. E. BISSELL, M. D.

LITCHFIELD, MINN., May 29, 1884.

Dear Doctor:—I have one case that, although not an isolated one, presented to me some peculiarities which may be considered worth reporting.

Was called on July 15th some 15 miles into the country to see a woman in confinement. Messenger stated that she had been in labor two or three days; that several midwives and one doctor had been with her, but no delivery. On arriving I found woman, age 40, mother of six living children; no trouble on previous occasions. Examination revealed a hand of child in vagina; pushing by this I en-

countered a soft, spongy mass that I was for a time unable to locate. There had been no pain for several hours and my first effort was to turn, but although the limbs could be reached, I was unable to make any progress in that direction. The hand was withdrawn, and a careful examination of the mass before mentioned convinced me that it was the head, but it seemed of abnormal size. I then, as the child was undoubtedly dead, determined to evacuate the contents and remove by instruments. Selecting the point of entrance, the craniotome was introduced and there came a gush of something that struck me in the abdomen with considerable force. I was relieved by the sight of water instead of blood, however, and with very little trouble removed the child. There was a very little substance, perhaps 2 or 2½ ounces of a gray ashy color at base of cranium; no other sign of brain matter. There was no hemorrhage after removal of placenta, and the mother made good and rapid recovery.

Within the next 30 days I attended one case of hare lip, one of talipes varus of both feet and one of spina bifida, and it was a relief when deliveries once more became normal.

Respectfully,

F. E. BISSELL.

TWO CASES OF TRANSVERSE PRESENTATION.

BY GARRETT MURPHY, M. D.

I have had two cases of transverse presentation within the last two years, which I might report, both patients having pelvic contraction in the conjugate diameter by unnatural projection of the sacral promontory.

The first had been in the care of two ignorant old wo-

men for thirty hours before I was called, and the child had undoubtedly perished. On examination the liquor amnii had been evacuated for some hours, the external organs tumefied and very sensitive to the touch, the right hand of the fœtus was nearly protruding from the vulva, the left hand being alongside the right arm a little higher up, the head occupying the right side of the pelvis and chest presenting. The uterine contractions were powerful and tonic in character and the fetal body so closely held it seemed impossible to dislodge it.

I administered chloroform and attempted to deliver by version, but after bringing down one of the feet could not move the body. I then drew down the right arm with the aid of an assistant, Dr. H., who had arrived in the meantime and who amputated it at the shoulder, and then we succeeded by powerful traction in bringing down the breech and effected delivery, removing the placenta and membranes manually thirty minutes later, having in the meantime given forty minims fluid extract of ergot to secure permanent contraction.

The child was a male, very large, yet there was no laceration or other accident, the sloughing was inconsiderable, and the patient convalesced in the usual time and has since borne a child without any medical attendant.

Her after-treatment consisted of full doses of morphic sulphate, with tr. gelsemium as indicated to control febrile excitement, with potass. chloras and vaginal irrigation twice a day with a mild solution of carbolic acid. Quinia sulphate and pepsin were given in moderate doses four times a day.

The second case was similar to this, had been in labor all day until ten o'clock P. M. The fetal body lying transversely was wedged into the pelvic cavity with the lumbar region presenting, the head in the right side of the pelvis and higher than the breech. This was also delivered by version, the child, a female, was resuscitated and

weighed eleven pounds. The anæsthetic used was chloroform.

There was no laceration, no untoward event except as stated, the placenta and membranes were expressed forty or fifty minutes after the birth. The patient left her bed in eight days and is now hale and hearty as ever.

A FEW OBSERVATIONS IN OBSTETRIC PRACTICE UPON THE SYMPATHETIC NERVOUS SYSTEM.

M. E. WOODLING, M. D.

The pregnant condition, from the first inception of the life which is to result in a rational and responsible being, to the moment it begins an independent existence, is an exceedingly interesting one, it being one of nature's most beautiful and perfect accomplishments, the creation of a new and living being, and it is fraught with the greatest sense of well being, physical, mental, social and moral, up to the last act of the process which is to be the realization of all hopes, namely, labor, provided all organs are in a normal condition, performing their functions normally and perfect health exists as nature intended. On the other hand, what a term of misery is pregnancy culminating in the lying-in room in scenes which wreck hopes and families.

Now, this is a natural and therefore a healthy process, and although it may be said that an extra demand is being made upon the mother, especially as regards nutrition and the creative power, still it is but the exercise of a natural power, and should be benefitted by use, and really is, as shown in many a case. If it be otherwise, then the individual is not in a normal condition. Compare this

condition with the development at puberty. Is not the same broad principle involved? And would a girl incapable of developing into womanhood, and whose organs refused to perform their functions normally, but instead broke down, became weak, anæmic, neuralgic, etc., be considered healthy? Nature only makes just demands. Intimately connected as the sense of general well being is with normal functions of organs, intimately connected as the various abnormal phenomena in the above conditions are with the nutritive and creative processes, is it not fair to presume that therein lies the cause for the production of these various phenomena? If so, attention should be directed to the ganglionic nervous system which stands at the head of the processes and is potent for good or for evil as its condition varies or not from the normal, and yet how little attention it has received in considering the vital processes in which it is so intimately blended, present as it is from the earliest moment in simple and complex organisms, and in death the last to yield. (See art. on Ganglionic Nervous System.)

A suggestion of the cause of one unexplained physiological phenomenon of pregnacy, viz., the "uterine souffle," will be offered; then will be briefly considered menstrual and ovarian disorders, convulsions, post-part. hemorrhage and exhaustion during labor, in relation to the ganglionic nervous system.

The "uterine souffle," murmurs produced in or in the region of the pregnant uterus, may be explained as occurring in the arteries in this region constricted and probably irregularly so as to time and extent, the constriction being caused by muscular contraction, whether of the uterine fibre or that of the muscular trunk of the artery itself, due to irregular (sympathetic) innervation, the murmur being produced as the blood passes the constricted part, the same as similar sounds are produced anywhere when the

caliber of a vessel is suddenly lessened, ex. sibilant and sonorous rales in the bronchi and heart murmurs in aortic stenosis, and this explanation holds good for the "souffle" heard over uterine tumors and not over ovarian.

It seems rational to class menstrual disorders (disordered uterine functions) and ovarian together, and refer all, where no lesion of the organ is discernable, to the sympathetic system. The phenomena, hysterical, etc., being the same as those occurring at the period of puberty. (See art. on "Hysteria.")

May not puerperal convulsions, although manifested through the cerebro-spinal system, be traced back to the sympathetic for an explanation of their cause? Even if uræmia, albumenuria, etc., do exist and the convulsion is really immediately due to it, this is only a result of a cause still farther back; and when it is remembered the part played in the process of nutrition, etc., is it any wonder that this system, not idle by any means, but subjected to great demands, should occasionally become exhausted, irritated or otherwise influenced, and the process of nutrition or elimination of some organ, as that of the kidney, be neglected? Why does the physician hasten delivery in such cases? Why does he hope to cure the case by so doing? To produce a decided impression upon the sympathetic, cause a reaction and arouse it to normal action, as well as to remove the first step (pregnancy) in the trouble. This accomplished, unless there be too great structural lesion, convulsions being controlled by anæsthesia until elimination of the retained poison, recovery takes place. The principle involved is the same in each ease, whether violent purging, emetics or bleeding is resorted to, the object is evidently sedation, that free elimination may take place, and according to this view, bleeding is the least desirable remedy if others will answer.

Post-partum hemorrhage occurs from lack of proper uterine contraction, due to an exhausted or paralyzed con-

dition of the sympathetic, whether from a sudden emptying of the uterus, and therefore abnormally rapid contraction, which, according to the law of nature, would be followed by relaxation, or whether from a general exhausted state or other cause. Treatment is rational. Physiological, whether from ergot or kneading the uterus or exciting the breasts as in applying the child to them, the action is the same and that of an irritant or stimulant to the sympathetic; and, without going into details, here can be seen the philosophy of applying the bandage after a sudden emptying of the abdominal cavity, as after labor or removal of large tumors or the evacuation of fluids.

Exhaustion in labor to the extent of appearing really alarming is of frequent enough occurrence that all physicians have doubtless seen it. Appearing without seeming cause and in the absence of hemorrhage or violent pains, even sometimes before pains sufficient to worry the woman have set in, with the extremities growing cold, the woman weak and yawning or perfectly quiet. The physician is apt to feel uneasy as to the safety of his patient; observation shows these subjects to belong to the same class or diathesis as the "hysterical," so this may also be referred to the sympathetic system. Notes of one case are here submitted as evidence that the above conditions do occur.

Case 4.—Primipara, aged 18 years, German, medium complexion, rather fleshy, hysterical, said to be three or four months in pregnancy; symptoms of abortion, pain down thighs, in the back and in front, sensation of weakness and exhaustion, pulse rather rapid, temperature 101° to 102°. Gave quinine in tonic doses, morphia et doveri for pain, rest in bed. At the end of 12 hours feeling much weaker; pains quiet only from opiates. Slight examination—uterus descended, os about the size of a silver quarter, no discharge, no blood up to this time, fœtal movements distinctly felt through membranes, extremities of

patient cool. Stimulants given; opiates withdrawn; patient seemed to bear them badly. Added few small doses of ergot to stimulants and quinine. At the end of six or eight hours more, uterus higher in pelvis, os less patulous, but patient weaker, and lower extremities cold to the knees; appeared to be growing rapidly worse. Gave ergot, ruptured membranes, and aided by some uterine contraction, hastened delivery. No difficulty in securing membranes, and all accomplished without any loss of blood, yet the patient was greatly exhausted and cold to the hips. She rallied slowly and recovered.

Inquiry: What was the trouble?

CHANGES IN THE CERVIX DURING THE LATER MONTHS OF UTERO GESTATION.

BY J. C. ROSSER, M. D.

It was believed, indeed, that during the early part of pregnancy the body of the uterus alone was concerned in forming a receptacle for the fœtus, but that as pregnancy advanced the upper part of the cervix became gradually used up, and was made to contribute to the amplification of the lower segment of gravid uterus, until about the natural time for the onset of labor nothing remained of the original cervical cavity except a ring forming the outer os. I confess myself quite at a loss to comprehend the notion of using up the cervical tissue to amplify the lower segment, and in the meantime the mucous membrane of the cavity should remain intact as has been demonstrated. My difficulty is more especially great, when upon investigation we find the tissues of the cervix, instead of being less large, are seen to be fully as large as could have been anticipated under the circumstances.

There is another question upon which I would like to hear the opinions of this Society—viz.: At what period during pregnancy does the cervix uteri begin to develop or open up?

It is usually stated that this change takes place within the last fortnight or ten days of pregnancy; but we must confess that the observations advanced regarding the process have hitherto been rather defective; still our knowledge of the changes which occur in the cervix uteri during labor, although far from complete, has yet increased so much of late, that it is necessary we should modify many of our ideas and correct many of our precepts of practice; seek fresh points of diagnosis, and discuss questions involving the first stage of labor on a different basis than formerly.

As a field for embryological inquiry the gravid uterus cannot receive too much attention, and I must confess that its cervical tissue has received too much abuse even while engaged in the process of parturition. It was observed by Litzmann that the tension of the walls of the uterus attains in primipara during the last two months of pregnancy a higher degree, on an average, than in multipara, and that contractions in the former are more frequent, and probably begin earlier, than in the latter. The outer os remains shut, or is only slightly opened; is at all events not traversable to the finger, especially in primipara, in contradistinction to multipara, not only more frequently, but also up to a later period of the pregnancy; and that the opening up and unfolding of the cervical canal upward from the external os occurs in multipara more frequently and at an earlier period than in primipara. In the latter it is not usually observed before the 34th week of pregnancy, while in the multipara the outer os is found completely traversable about the 33rd week.

It is difficult to over-estimate the value of the attach-

ment of the membranes around the inner os as a means to establish the commencement or not of development of the cervix at its upper extremity, and also in settling the question with which we started, and that the cervix uteri at its upper pole is earlier interfered with in primipara than in multipara; and that the cavity of the cervix uteri does not shorten during pregnancy, except within the last month, but rather lengthens; and observations founded on its supposed shortening, are entirely erroneous. I do not mean to deny that there is an apparent shortening, as ascertained by the examining finger as pregnancy advances. But what I would affirm is, that this so-called clinical fact, when tested by accurate observations, will prove a delusion. The mistake is the result of several concurrent factors, being partly due to varying heights of the pregnant uterus, partly to changes in the bulk and curvatures of the cervix, and particularly to the increasing softness of its tissues, which diminishe the sense of resistance, and thus gives the idea of shortening to the examining finger.

Still, it is by no means denied that a certain amount of accuracy in judging of the advance of the pregnancy from the apparent shortenings of the cervix in the latter months is obtainable. For there is no boubt but such opinions can be obtained, and have been obtained, with a considerable amount of certainty.

Since Duncan's extremely able publication on the subject, the bleedings in placenta prævia is now pretty generally regarded as accidental; whilst the occasional occurence of absence of bleeding in this condition, up to the commencement of labor at full term, is as strong an argument as could be brought forward in favor of the question of persistency in the cervical canal as above indicated. Should the cervix open up normally within the latter three months, bleeding would certainly begin as soon as this process began. But all cases do not

do so. The effect of position over the inner os, leaving, as it does, a certain area of the placental surface unsupported, and subject to increased vascula pressure, is more than sufficient to explain the frequency of hemorrhage in those cases within the latter months, without assuming any opening up of the inner os.

There is another question to which I would respectfully draw the attention of the Society. When called in consultation by many of my brother physicians I have usually noticed that they invariably refer to the "size," or rather, to the extent, to which the os has dilated,—as indicating the progress of the first stage of labor. Of itself, or by itself, I regard it as an unsafe criterion of the amount of the other changes which are taking place. The os may be small, or only half dilated, and yet the cervix be thinned out to an injurious, if not dangerous degree. I think we should qualify to a certain extent the opinion that so long as the labor is in the first stage and the membranes unruptured, there is no danger to mother or child in delay. How often do we meet with cases when the pains are regular, but the progress is not proportionate to the uterine contractions; and the experienced may recognize that what is wanted to facilitate labor is artificial rupture of the membrane? Large quantities of the liquor amii seem often to paralyze the uterine muscular tissue and thus render the process tedious.

There is another condition to be noted, which, in conjunction with the others, does not as a general thing receive the attention it merits, and its recognition is necessary to understand properly why the progress of parturition is often retarded. The thick ring of the uterine wall may be felt during a pain above the pubes, it may be several inches above, while the cervical tissue is thinned out to an almost abnormal extent; and several writers have pointed out this condition and its influence in the production of rupture.

The development of what has been distinguished as the "vaginal diaphragm," and its value in a diagnostic point of view, should also claim due consideration. The degree of development of the vaginal diaphragm and the extent to which the vagina is drawn up, may, in some instances, be regarded as of higher diagnostic value than the size of the os. What is the relation of the changes appreciable to the finger to those occuring higher up, remains yet to be decided.

Another important question which has to be answered is, what is the exact site of the tissue which forms the diaphragm? Ordinarily, it is the vaginal portion of the cervix, the external os being the last to dilate, and it is in this portion that the ordinary laceration of the cervix occurs. It has been pointed out that sometimes the internal os is undilated, while the external has been opened up to the extent of two or more inches. Consequently the practical bearings of these considerations is, that we cannot always regard the size of the os uteri by itself, as the criterion of the changes which have taken place in the first stage of labor. What we are to judge of is the degree of expansion of the lower uterine segment and cervical canal. This may be complete whilst yet the os is small. What we are to consider is, how far the vaginal culs-de-sac are drawn up, and the degree of development of the vaginal diaphragm. When this is well formed, and not till then, will artificial dilatation be of service, and should never be attempted as long as both the inner and outer os can be recognized. It should also be remembered that the cervix uteri may become one of the most powerful disturbers of the complacency of the organisms; and can affect the brain, respiration, digestion, circulation, the secretions and the nutrition, and thus precludes the possibility of being relieved by any individual plan of treatment.

Report of Committee on Gynæcology.

G. F. FRENCH, M.D., CHAIRMAN.

Mr. President and Gentlemen of the State Society:

In presenting our report on Gynæcology, your committee, while avoiding theoretical discussions, have endeavored to furnish a digest of the subject of a purely practical character.

ANTISEPTICS.

Bearing on the subject of antiseptics in gynæcology, I quote the following from the notable paper of Dr. T. G. Thomas, on the prevention and treatment of puerperal fever, read last December, before the New York Academy of Medicine:

"Yesterday, at 4 p.m., I saw in Stamford a very bad case of puerperal septicæmia; this afternoon at 3 I performed Tait's operation upon a very important case, which could not be delayed. I ventured to do this only under these circumstances: this morning I took a bath of hot water strongly impregnated with salt, and after it shampooed my hair and beard thoroughly with a saturated solution of boracic acid, scrubbed my hands thoroughly by means of a nail brush with a solution of bi-chloride, one to one thousand, and changed every article of clothing which I had worn at the moment of exposure. The trouble was not great nor was the process a disagreeable one. It may have done no good whatever, but I feel sure that it did no harm, and it certainly quieted my conscience and gave me a feeling of comfort that I could have obtained in no other way."

These words have no uncertain ring and the spirit manifested is worthy of imitation. No medical man of our

generation speaks to the profession with more authority than Thomas. But on this point he merely voices the the opinions of Tait, Keith and Battey. I would it were impossible for any man to practice gynæcology or obstetrics, who would not bind himseif to carry out these doctrines. Cleanliness is godliness itself, and if a man's gentlemanly instincts will not keep his finger nails clean he should be compelled by the terrors of the law.

A practical suggestion on the extirpation of urethral caruncles, which exhibit an epitheliumatous tendency, eminates from my friend, Dr. C. H. Hunter, of Minneapolis: An unmarried woman, 30 years of age, came under my professional care for the treatment of urethral caruncle, which had twice returned after excision. The growth was situated as usual at the orifice of the passage and at the suggestion of Dr. Hunter, I dissected out a full half inch of the meatal end of the urethra, dragging down without difficulty the distal end of the cut and stitching it to the orifice. The feeling of tension which we should naturally expect would follow so appreciable a shortening of the water passage disappeared in a couple of weeks. In cases requiring complete extirpation, by reason of malignant tendency, I believe this to be a valuable and thorough method of proceedure.

HYSTERECTOMY.

In the New York *Medical Journal* Dr. M. Polk discusses at length the indications for hysterectomy and thus concludes: "I may sum up by saying that in cancer of the cervix the common form of uterine carcinoma, Freund's operation is contra-indicated; for the disease, if local, can be eradicated by the amputation, if necessary, of the entire cervix; whereas, if glandular infection has occurred, a cure is impossible, palliative measures being then all that are justifiable. From this category I would exclude Freund's proceedure, for it is in my opinion less

useful and far more dangerous than a combination of the many now in vogue. In primary cancer of the body of the uterus it is justifiable, provided the diagnosis be made before glandular infection has occurred; but this is a difficult, and in some instances, an impossible question to determine, and that too in a rare disease. In sarcoma of the uterus it is fully justified, and the conditions calling for it can be determined with reasonable certainty, yet the disease is far from common. Consequently the field open to the operation is very narrow."

In the *Lancet* Dr. G. Graville Bantock says that we should never dream of resorting to oophorectomy in a case of pediculated fibroid, or large multiple fibroids. Experience has already shown it to be useless in these two classes. But that there are certain cases in which oophorectomy should take the place of hysterectomy he freely admits. Such a case is that of a small or very moderate sized intramural fibroid; in such a case oophorectomy will, he believes, render us good service, and should be performed on account of its small risk. But when the tumor is large, he believes oophorectomy to be as dangerous, and in some cases even more dangerous than hysterectomy has now become under improved methods of performing the operation.

Trachelorshaphy plays so prominent a role in gynæcology, your committee have thought best to go somewhat into detail in the discussion of this subject, and have endeavored to indicate the present status of Emmett's operation.

The recent address of Dr. T. A. Reamy, before the American Medical Association, contains so many valuable suggestions, and on the whole presents the subject so candidly, I cannot do better than follow his line of thought in discussing the benefits, dangers and complications attending trachelorshaphy. He says: Since 1874 I have made the operation upon 231 patients. Not a single death

has occurred. In six cases the operation was followed by perimetritis, parametritis or peritonitis. In but three of these cases, however, were the symptoms sufficiently severe to cause material delay in complete recovery. In one case included in these three, there were perimetritis, parametritis and general peritonitis. The patient was in bed for three months. During the attack (acute stage) the peritoneal cavity was aspirated twice. On one occasion seventeen ounces of serum were removed. This woman finally recovered her health completely. Considerable immobility of the uterus remained for a long time, but now, at the expiration of two years and a half, its mobility is about normal and menstruation normal and painless. Prior to the operation she suffered from both menorrhagia and dismenorrhœa. The above case was one of bilateral laceration, extending on each side to the vaginal junction, the torn lips being widely separated and eroded. I attribute the inflammatory complications following the operation to the undue degree to which the uterus was dragged down in order to give unobstructed access.

In three cases the rent extended to the internal os. In one of these the vaginal wall was likewise extensively lacerated; the peritoneal cavity had probably been opened, followed by protracted cellulitis. This patient remained a helpless invalid during the three years intervening between the accident and the operation. On one side it required twelve sutures to close the cervical and vaginal rent. Perfect success followed the operation, the patient being restored to robust health in six months.

In 26 cases I operated upon the cervix and perineum at the same sitting. In five cases of this series, I curetted the uterus with my blunt wire curette at the same sitting. In none of these five cases did a single untoward symptom arise. The results were perfect. It is, perhaps, as well to state here that I never hesitate to curette the

uterus in a case demanding it, at the time of operating upon the cervix. Nor do I hesitate to use the curette immediately preceding a perimeorrhaphy, pretty extensive clinical experience having convinced me that neither of these operations add materially to the danger of curetting. Indeed, I am inclined to the opinion that in certain cases in which the conjoined conditions demanding the two operations exist, the deplétion of the cervix in trachelorrhaphy presents an element against inflammatory processes which may follow curetting.

Three violent cases of traumatic peritonitis have occurred within my personal experience from the use of the curette unconnected with other operation.

In not a single case of trachelorrhaphy performed by me did secondary hemorrhage occur.

The restoration of form in closing the divided lips of a torn cervix, especially where the deformity is great, is important. The removal of such pathological conditions as may threaten the development of cancer, and no one can deny that this is, in a certain proportion of instances, within the scope of the operation, may be even more important; but the influence of trachelorrhaphy properly done, upon subinvolution, cannot be over estimated. Thorough denudation, cutting out all cicatricial tissue, and allowing free depletion, embrace the essential points in the operation so far as its influence is concerned.

Unquestionably many cases of laceration occur unavoidably, no matter what care and skill may characterize the accoucheur's services. It should be the duty, therefore, of the gynæcologist to protect the physician who may have been present at the confinement, against censure which may be unjust. All the more because the laity, when informed that laceration of either cervix or perineum has occurred, at once assume a want of skill or care in the obstetric service. The emphatic declaration of the unavoidableness of these accidents should, by the gynæcolo-

gist be voluntary. So great is the danger that professional reputation may unjustly suffer from this source of censure, that in an editorial of a recent issue of one of the ablest medical journals in the country, this was used as an argument against the adoption of Emmett's operation except in extreme cases.

Mr. Jonathan Hutchinson points out that in many cases the first stage of cancer is that of inflammation; that "all inflammations are infective and inflammatory processes may pass by almost perceptible gradation into malignancy."

The acceptance and appreciation of the above facts would lead in many cases to the more vigorous treatment of localized inflamations, more especially when they are in structures known from clinical experience to be especially prone to cancer, as the uterine cervix, the mammæ, etc.

These considerations alone, even if they were not supported by others, urge upon our attention with great force the importance of Emmet's operation.

It is the concurrent testimony of almost every distinguished American gynæcologist who has expressed himself on the subject, together with many abroad, including Briesky and Schroeder, that the fretting of exposed tissue consequent upon ununited laceration of the cervix is a prolific source of danger in developing cancer. Emmet, Thomas, Goodell, Munde, and others, have cited cases verifying this danger. In my own practice quite a number of cases of cancer of the cervix have been observed, in which the neoplasum developed either in the cicatricial tissue resulting from laceration or in the apex of the cleft.

In my opinion of the accident under discussion in producing cancer, has never been fully comprehended by any one. Emmet, the distinguished author of the operation under consideration, at first spoke out unequivocally;

now, however, he alleges that he does not make trachelorrhaphy once where formerly he did it ten times. It is easy to read between the lines of what he has recently written that he does not now believe the evils arising from laceration, not operated upon, nearly so universal as he formerly believed them to be. He seems greatly to deplore the extent to which the operation is being done, and, as I think, without just cause.

In further considering the relations between this injury and Emmet's operation, to cancer, it may not be amiss to call attention to the fact, so thoroughly recognized by clinicians, that cancer of the cervix is almost exclusively found in women who have given birth to one or more children, or been the subjects of abortion. So far as the cervix is concerned, cancer is a disease of child-bearing women, not of virgins. In more than 300 cases of cancer of the cervix of which I have notes, but one occurred in a virgin, and but ten in married women in whose cases I could find no evidence of abortion or child-bearing.

It is claimed that Emmet's operation should be limited to cases in which ectropion has occurred, or in which a cicatricial plug imprisons or presses upon the branches of sentient nerves, causing painful refles symptoms. I have heard it repeatedly stated that no matter how extensive the laceration, the operation is not warranted unless these symptoms are present. This is, in my judgment, an error. Any laceration which has healed without its surface being in contact, must have healed without complete union, although its extent may have been much lessened by granulation. In all such cases there is more or less cicatrical tissue in the field of repair.

If the rent be small the operation is small, especially if it be done before chronic inflammation of the cervix has occurred as a result. The denudation need not be extensive or deep. In many cases an anæsthetic need not be administered, as the parts are not very sensitive. The

uterus need not be drawn down, so there can be but little danger of cellulitis or peritonitis resulting. Why not do these operations in these slighter cases then, as the simplest and safest method of cure, and thus avoid results which may arise in future and prove more serious? I I may have made the operation in cases not demanding it but from my point of view I do not think so. In eight or ten cases reflex nervous symptoms which I hoped to banish by the operation, remained, but in most cases the good effects were obvious, and in some the cures were almost marvelous.

LACERATED CERVIX.

Dr. E. P. Murdock, who published a paper advocating immediate operation for lacerated cervix in the *Western Medical Reporter*, gives the following as his reasons for advocating this step.

1. It is in accordanee with the well-established maxims of all good surgery that the operation to repair an injury should be performed at the earliest possible moment, to secure union by first intention, to prevent deformity, and to prevent sepis.

2. It saves the patient the incalculable annoyance of preparatory treatment, with its physical burdens and mental anxiety contemplating a second operation.

3. It gives the patient the best possible chance to escape septicæmia, subinvolution, and all the other complications which follow cervical lacerations.

4. It saves the patient much time, great expense, and avoids a deformity which, in many cases, would never be repaired by plastic surgery.

Before the Obstetrical Society of Philadelphia, (meeting June 7, 1883,) Dr. B. F. Baer made the following remarks, which serve to strengthen Dr. Murdock's conclusions: "The longer the time which has elapsed between the occurrence of the injury and its repair, (pregnancy

being absent during this time,) the greater and more permanent will be the changes in and about the uterus, which almost necessarily result in a continuance of the sterility after the cervix has been restored." And he also said that if five years or more had expired between the occurrence of the injury and its repair, sterility would be likely to remain. In support of this, he reported twenty-seven cases, of which number thirteen had been sterile for from six to sixteen years. Of this number not one has become pregnant since the operation, but of the eight cases in which pregnancy had occurred within two to five years previous to the operation he reported four that had become pregnant, and he now adds two more.

Still further confirmation is given to his view by Dr. William T. Lusk, who in the New York Medical Journal says: "It is always a good plan at the time of laceration, to take a pair of vulsella forceps, and as an assistant presses down the fundus of the uterus through the abdominal walls, you can draw the cervix down and then with a needle and thread sew up the womb, as the tissue is now patunous and easy to work upon. In this way you can check the hemorrhage and a suture makes the best hæmostatic we have."

PORRO'S OPERATION.

As of interest, I note that Dr. Robert P. Hariss of Philadelphia stated in the American Journal of the Medican Sciences, that from a careful examination of the literature of the subject, he finds that we have no less than nine forms of operations, some of them differing very materially from the original, all called by the name of "Porro," and classified together, although having very different rates of mortality. It is hardly necessary to claim that this is very unjust to the originator, and unfair to his opeeration. If the Porro method is to stand on its merits,

rated by its proportion of cures, we must in justice exclude from the record all the cases not strictly deserving of the title. As it would only complicate the matter to make nine orders of cases, Dr. Harris proposes to combine them where this can be fairly done, and thus reduce the list to four classes.

1. True Porro operations, Porro-Mueller operations.

2. Puerperal utero-ovarian amputations, with the pectule dropped in.

3. Premature ablations of the gravid uterus, the fœtus not being viable.

4. Prevot's operation, miscalled "Porro," (utero-ovarian amputation after laparatomy for rupture of the uterus.)

Dr. Harris appends a tabular record of 140 cases from which it appears that the Porro operation, carried out as originally designed, has saved 46 14-41 per cent. of the cases; the Porro-Muller method, unmodified, has saved 52 16-17 per cent.; and the combined 48 8-29 per cent. of the women, and 90 out of 118 children.

LEFT-SIDE PAIN.

We frequently have patients come to us complaining of pain in the left side who are apparently healthy and we are at a loss to account for the pain. At a recent meeting of the Academy of Medicine in Ireland, Dr. Wallace Beatty read a paper on the subject which is published in the Medical Press and Circular January 3, 1883. He considers the pain due, in many instances, to fœcal accumulation, and it can be removed by getting rid of the accumulation. The pain is felt over the lower few ribs on the left side, associated with great pain on upward pressure of these ribs, but no pain on downward pressure. He ascribes the pain to the dragging of a loaded colon on the pleuro-colic limament, setting up extreme irritability of the nerves.

A very important and valuable suggestion to gynæcologists comes from Dr. Seth C. Gordon, of Portland, Me., who, in a paper read last year before the Maine Medical Association, announced a new operation for the cure of uterine hyperplasia disconnected with laceration of the cervix—a procedure likewise calculated to cure retroflexion and prolapsus dependent on hyperplasia. The operation essentially consists in excising bilaterally a V-shaped piece from the cervix with a view of shrinking the uterus as you do the tonsil by excising a portion of it. Long before the publication of Dr. Gordon's paper I had taught and practiced this operation which is identical with the one taught by Emmet in laceration of the mucous membrane of the cervical canal. I believe it to be the only rational and successfnl method of treating retroflexions, and from personal experience can verify the sanguine predictions of Gordon's paper.

A momentous complication to gynæcologists in making abdominal sections is that disease of peritoneum described by pathologists a miliary tuberculosis. On the 16th of last March while performing a Tait operation for pyosalphinx, I came upon the following morbid condition: In cutting through the peritoneum, which was from ⅛ to ¼ inch in thickness and of a congested florid hue, the intestines were found matted together en masse close to the spinal column, and bathed in a thin straw-colored fluid. The injected friable peritoneum on its parietal and visceral surface was diffusely studded with minute yellowish white nodules varying in size from one to three lines in diameter. As a purulent cyst in one of the Fallopian tubes had ruptured into the peritoneal cavity, I hoped that the pathological condition above described might be simply an inflammatory product, though at the time, its possible tuberculous character was talked of.

Subsequent microscopical investigation by Dr. Hunter proved its tuberculous nature unequivocally. The case

terminated fatally on the sixth day. This operation was made on the 16th of March. On the 28th of March, Dr. E. C. Dudley reported a similar case before the Gynæcological Society of Chicago which terminated in recovery. Dr. Dudley's case was also believed to have originated in a pelvic abscess—that is, to have been of inflammatory origin. The primary diseases in both instances seems to have been in the Fallopian tube, the peritonitis being a secondary development. Among Spencer Wells' thousand ovariotomies there was but one such case which terminated fatally on the fifth day.

I gather from the discussion of this case before the Gynæcological Society of Chicago, by Dr. Fenger, that Prof. Kuster of Berlin, says that Schroder told him that he had met with peritoneal tuberculosis while performing ovariotomy and that he powdered the tubercular peritoneum with iodoform and the patient recovered without any trouble. Dr. Fenger also cites a recent article by Kœnig on "Tubercular Peritonitis simulating abdominal tumors," in which three cases are reported with a favorable termination, though one afterwards succumbed to general tuberculosis. Such results place tubercular peritonitis in an entirely different aspect from that believed and taught by all medical writers up to the present time. If iodoform sprinkled over a tubercular peritoneum cures the disease, we must alter our notions of the essentially cachectic and fatal nature of the malady. We can readily understand how a cheesy deposit in a Fallopian tube might kindle local tubercular disease in its immediate neighborhood, but how tubercular disease diffused over the entire peritoneal surface could still remain local in character and be so readily amenable to treatment is a paradox.

PELVIC CELLULITIS, AND ITS EFFECTS ON PREGNANCY AND PARTURITION.

BY J. C. ROSSER, M.D.

There are those among us, now engaged in the investigation of mental and moral perturbations, who are beginning to recognize that in the defective organization of the connective tissue of the brain, they find a physical basis for the more occult moral manifestations. History warns us, however, regarding the customary fate of new truths; and theory as only a species of thinking; and that the struggle for existence holds as much in the intellectual as in the physical world. Every belief is looked upon as the product of two factors; the first is the state of the mind to which the evidence in favor of that belief is presented; and the second is the logical cogency of the evidence itself. In both of these respects the history of gynæcological science during the last twenty years indicate many great advances along the plane of professional thought. With a mass of material furnished by personal observation, ten years ago Dr. Thomas Addis Emmet first sought to graft upon cervical lacerations an explanation of many frequent and unrecognized cause of disease; and five years subsequently he produced a profound impression on the mind of the medical world through the vigorous exposition of his views, in which he endeavors to show the development of pelvic cellulitis, and claims for it an importance not hitherto recognized, on the ground that it is seldom appreciated, and often overlooked when limited in extent. He regards it as the "most common condition of pelvic inflammation in connection with the non-puerperal diseases of women." Backed by the observations of Emmet, which have been still further prosecuted by other investigators, this condition is no longer

regarded as a mere eddy of fashion, but truly strengthened and supported by the irrversible current of professional progress, and like it, safe from retrogressive reaction.

I do not intend to dwell upon the etiology of pelvic cellulitis, to say how it is produced, or intimate how the different grades of this disease are to be harmonized or explained. No doubt but what it may originate from secondary causes. This notion was exclusively held by Duncan and others; in fact, it was a favorite fancy thirty years ago, and survived towards the present day, or until Emmet conferred upon it an entirely new signifigance; and his fundamental principle is, that between the uterus, its appendages, and the pelvic cellular tissue, there is incessant interaction, and each is influenced by the other, and modified to meet each others' requirements; and that the disease may become localized in the veins of the connective tissue, which are more susceptible to pathological changes than the surrounding tissue, as its anatomical structure would intimate.

The majority of cases of pelvic cellulitis that have come under my observation were associated with abortions produced between the second and third months of pregnancy, intentionally. That I may show its bearings on pregnancy and parturition, will relate the history of a case that came under my observation during the past year, and hope that you will not rail at me for coming among you with so stale a story.

Mrs. D., aged 34 years, the mother of four children, all living. Had always been healthy up to twelve months since, and about that time had a miscarriage, about the second month of pregnancy, and since that event has not been well, and had been under the care of a physician, who thought that she was suffering from a uterine tumor. About four months afterwards the uterus had become decidedly enlarged, and my brother physician requested me

call with him and see the patient, as he said "that he was quite sure of his diagnosis." I found the woman dressed but laying down, as she could not stand on her feet without a deal of pain. There was also much pain in the sacral region and throughout the pelvis, with an occasional sense of bearing down. The pain would "run down her limbs when she would attempt to stand on her feet." She also informed us that her water gave her much trouble, that is, she had to empty the bladder very often. Her physician informed me that he "had made a careful analysis of which but found nothing abnormal." I insisted on an examination, and will tell you what I found. As my left index finger glided along the vaginal walls, first on one side then on the other, I detected nothing abnormal until my finger reached the cervix, which I found below the normal place, and drawn towards the left side of the vagina. I then placed my right hand over the lower part of the abdomen and was thus enabled to map out the enlarged uterus, and also to detect considerable thickening and tenderness about the ligament on the left side, which told its own story, that if cellulitis was not present it was indeed still smouldering there. When my finger passed on to the posterior cul-de-sac it then struck up square against the doctor's tumor. It was small, however, and the doctor informed me that he had imagined that it was growing less. An examination by the rectum disclosed some tenderness about the upper portion of the brood ligaments. Diagnosis: patient pregnant and advanced about three months and a half, and also the victim of a latent pelvic cellulitis.

Now, shut the volume of history and clinical experience and tell us how this case is going to terminate. Is there no danger of a second miscarriage, when we take into consideration that all the blood vessels and nerves which reach the uterus pass through the pelvic cellular tissue? Can these vessels be put on the stretch, or have their

caliber lessened by the traction of pregnancy without danger? I contend that many a "rigid os" in times of labor has its correlative in a pelvic cellulitis, and that the integrity of the cervix uteri may become so modified as to rupture under a normal pressure.

But I must proceed with the history of my case. We began our treatment in this case with "hot water vaginal injections," as directed by Emmet, and continued with them thrice daily, until all tenderness disappeared from the pelvic cavity. Within three weeks our patient was free from pain, and her pregnancy terminated in due time in a natural manner, as I was informed by her physician. All went well for the first ten days after her confinement. On the tenth day she was allowed to sit up in bed. But to this inch she added an ell. She got out of bed, walked across the room, halted, as if by a common impulse in front of a window, and continued there for an hour or more. The maple was in its autumn glory, and the exquisite beauty of the scene outside seemed in her case to interpenetrate without disturbance all advice from her physician. Ere long, howerer, earnestly, almost sadly, she turned to her nurse and said that she believed she was going to have a chill—to help her back to bed and send for the physician. The doctor informed me that on his arrival the rigor had passed off, and he found her in a copious perspiration, and manifested tenderness over the region of the uterus. What he did to relieve her condition I do not know. But the rigors continued at intervals for several weeks, or until I was called in consultation. From the history of her sufferings, of course, I was in condition to anticipate her trouble; and the first tangible symptom that greeted me was the discharge of mucous from the rectum; and she also informed me that for several days past an operation from the bowels was almost unbearable. Our conclusions were that a cellulitis had terminated in suppuration, and with a free incision the

abscess was evacuated per vagina; and by the persistent use of hot water and other remedies the patient recovered.

LACERATION OF THE CERVIX UTERI.

BY FRANKLIN STAPLES, M. D.

I desire to submit the following brief observations concerning the treatment of old laceration of the cervix uteri by the Emmet operation.

1. The surgeon should not expect nor allow his patient to hope for the immediate relief of all the disability to follow the operation, no matter how successful the latter may have been. If leucorrhœa has been a prominent symptom he may expect, in this, decided improvement at once; but, inasmuch as many of the pathologieal results of this injury are found in either local or general affections of the nervous system, time is required for a restoration of health after the cause of the disability has been removed. It has been my observation that the general debility, the neuralgias and reflex irritation and the disturbance of the menstrual function which have seemed to be dependent upon an abraded os and a cicatrical cervix due to old laceration, do not wholly cease to exist until several months have elapsed after the removal of the cause.

2. The cases requiring the operation are not limited to such as show a defined laceration on one or both sides of the cervix. In many cases where the cervical tissue has been severely injured, perfect involution fails to take place and the enlarged cervix may be greatly improved by a removal of a part of its substance. The improvement will not be completed by the operation itself, but the subsequent changes in the remaining cervix induced

by the operation will further tend to restore the uterus to a normal condition.

3. It is, I think, an exceptional case where an attending physician can, at the time of labor, decide whether the os uteri has been so injured as to require the operation in the future.

4. Hart and Barbour of Edinburg, and I think Emmet of New York, say that the stitches should be removed on about the eighth day. I think it is in the observation of many operators that the sixteenth day is a better time.

5. I have known pregnancy to occur in five cases within a year after the operation, and in two of the five it occurrd within three or four months. In two of the five there had been sterility for several years before the operation. In one case the laceration occurred at the birth of the first child and she had had a miscarriage subsequently, evidently resulting from the condition of the os. Four of the five pregnancies terminated in natural delivery at term, and the other is now at the eighth month. I attended one of these cases in the confinement and could detect no laceration, had a smooth and evenly dilating os during the passage of the head. I examined the case several weeks afterwards and found a very good cervix. I have had a similar report from a physician who attended another of the confinements.

6. Antiseptic measures are important in this operation and in the subsequent care of the case; but, in my opinion antiseptic work is worth but little in any department of surgery unless it is thorough and complete. It is, I think, because of this fact that Listerism comes into such ill repute in the hands of many surgeons.

BORACIC ACID.

BY A. W. ABBOTT, M. D.

On the use of boracic acid in endometritis, granular condition of the os uteri and lacerated cervix, *i. e.* in all benign cases accompanied by the discharge called leucorrhœa.

That boracic acid has justly attained distinction as an effective subduer of imflammation of mucous membranes is probably now universally acknowledged. Its great capabilities for usefulness in the diseases of the mucous membrane of the uterine canal is, we fear, not fully appreciated. It is our experience that a single complete application of boracic acid to the cervix in the erosion that accompanies the flaring out of the eroded lips of a torn uteri neck will do more to reduce the engagement and check the muco-purulent discharge than repeated applications of hot water, iodine, copper or silver nitrate.

Boracic acid is an acknowledged gemicide of great effectiveness; that this explains its prompt action is probable.

It may be pushed into the uterine canal by a tube with plunger, or may be carried in upon cotton soaked in glycerine. To the cervix it may be applied by taking a good sized ball of cotton as large as an egg, moisten with water, press flat and turn up the edges, fill the concavity with glycerine, and then as this soaks into the cotton fill again with the finely powdered acid. In this way a heaping teaspoonful can be placed fairly against the os and with a certainty that all parts of the eroded will be brought into contact with the powder. This should be left in suture for from 12 to 24 hours. It produces no smarting in the vagina and no uterine colic when placed in the canal. It is especially useful in those cases in which the discharge is irritating or productive of pruritus.

TWO CASES OF ATRESIA OF THE VAGINA WITH PREGNANCY.

BY F. A. BLACKMER, M.D.

Case 1.—In February, 1883, Mrs. M. applied to me on account of atresia of the vagina, saying that she was grown up, and that she thought she was pregnant. She stated that three years before she had a lingering labor with instrumental delivery, that she recovered very slowly, and that sexual intercourse was painful and unsatisfactory, that she sought medical aid and learned that her vagina was closed at about the middle, that her husband was soon tired of her and left her. She also stated that in about four months after her confinement she began to have a very offensive discharge that made her very disagreeable.

On examination, I found the vagina closed about an inch and a half from the vulva, except a small tortuous opening that would hardly admit a common sized probe, and from this opening a thin saneous, offensive discharge oozed. Fluid could be detected above the constriction, and also what afterwards proved to be the gravid uterus. She was examined by several medical gentlemen, including one eminent gynæcologist, and the opinion of all was that she could not become pregnant through so small an opening with such a fetid mass beyond it.

April 15, 1883, assisted by Dr. A. C. Wedge and Dr. A. M. Burnham, I placed her under ether, and with a sound in the bladder and a finger in the rectum for guides, I opened the vagina by means of cutting with scissors and tearing with fingers. The vagina was found to contain considerable fluid, which was thoroughly washed out with warm water, to the last quart or so of which was added a little carbolic acid. A Sims dilator was placed in the vagina and left for about three weeks. At

the end of the fifth day after the operation, uterine pains began, and the lady had a miscarriage of about three months' standing, from which she recovered in the usual time, care being taken to remove the dilator and wash out the vagina twice a day.

I heard from the lady frequently for about six months after the operation, and she always wrote that she wore the dilator nights, and that the vagina is of natural size. She has lately secured a divorce from her former husband and married a new one, and I presume needs no dilator.

Case 2.—In 1870, Mrs. H. was confined and had a tedious labor, but recovered from it without medical aid. The following year she applied to me because she was grown up and because it was impossible for her husband to cohabit with her. She had not menstruated for four months. Her husband had not co-habited with her since her confinement, but had often tried. I examined her in company with Dr. H. C. Wedge, and found the vagina closed about a line above the meatus, except a small opening that would not admit a No. 8 cather, without difficulty. The adhesions were torn up with the aid of scissors and the finger, and a lampon worn, which was afterwards replaced by a glass tube. She began to feel motion soon after the operation, and in five months had a full-sized healthy child. At the time of her confinement a few cicatricial bands were felt to give way, and the labor was terminated with the forceps.

Report of Committee on Nervous Diseases

WM. DAVIS, M. D., CHAIRMAN.

Mr. President, and Gentlemen of the State Medical Society:

Your committee decided to select "Hysteria" as the subject for report this year, and with that purpose sent out the usual circular to members of the Society. The replies which have been received are subjoined. Unfortunately they are few in number, a circumstance which certainly cannot be attributed to the rarity of the disease in question as there is scarcely any affection, and certainly none among the disorders classed as nervous, which occurs so frequently and in such varied forms as hysteria.

The result of this frequency of occurrence is not, as might be expected, that familiarity makes it always easy to recognize, for the physician often finds it very difficult or even impossible to tell whether he has to deal with one of the innumerable and varied manifestations of hysteria, or with an organic disease, perhaps a serious one. True, it is seldom a matter of life or death and an error in judgment is but little likely to lead to serious consequences; but the annoyance and worry are often greater than when dealing with more serious cases, and a mistake made under such circumstances may do considerable harm to any man's reputation. To make an alarming diagnosis and give a grave prognosis where the trouble suddenly proves to be either functional or altogether imaginary, or to subject a family to the expense, trouble and anxiety of a long sickness caused by nothing but a defective or morbid condition of the will, is vexatious and humiliating, but how

much worse it is to pronounce a really serious affection either intentional deception or a merely functional disturbance; and yet, how often must the physician fear that whichever path he chooses he may be led into one or the other of these pit-falls.

That this paper will throw much new light upon the darkness of diagnosis in hysteria, is more than can be expected; but it is hoped that it may present some of the points of distinction in such a manner as to justify its writing.

The differential diagnosis between hysterical and epileptic convulsions, as ordinarily described, is very unsatisfactory, particularly where it is endeavored to make the distinction from the characteristics of the convulsions themselves. It is stated that in the hysterical form consciousness is not completely lost; that the convulsive movements are wilder, more irregular and of greater extent; that there is absence of a regular sequence of tonic and clonic convulsions; that instead of the single cry at the beginning of the epileptic attack, there is apt to be more or less outcry all through the hysterical fit; and that the duration of convulsive movements is often much greater in hysterical than in epileptic attacks.

That these points of distinction are sufficient for ordinary cases is doubtless true, but in ordinary cases the diagnosis is made easy by the presence of general evidences of hysteria. The writer has witnessed a case of convulsions following close upon labor, where there were all the characteristics of epilepsy, and the widely dilated and immovable pupils testified to the absence of consciousness. In this case no history could be obtained at the time of the attack, but the case was considered probably hysterical from the passage of large quantities of clear urine with no trace of albumen during the convulsions, and the subsequent behavior of the patient confirmed the diagnosis. A case of this kind hardly comes

under the head of "hystero-epilepsy" as described by Charcot, where the resemblance to epilepsy is greater than in ordinary hysterical convulsions, but there is a regular cycle of events, including emotional attitudes and great movements with a preceding aura, and accompanied by tender points, usually in the ovarian region.

Besides the passage of large quantities of clear urine or the shedding of tears during or after convulsive attacks, one of the most reliable diagnostic points between hysteria and epilepsy is temperature; for, although a single epileptic seizure does not cause a perceptible rise in the thermometer, yet in the "status epilepticus," where the fits succeed one another rapidly, there is a decided rise of temperature. On the other hand, the temperature is not affected even by long-continued and often repeated hysterical convulsions.

It has been found that there is no organic disease which has not its functional counterpart, and it may well be that true epileptic convulsions may arise as a symptom of hysteria. In such a case the convulsion itself would have no distinguishing mark, but other symptoms of hysteria would be present, fits of weeping or laughter, tender points, spasms, neuralgia, persistent cough, hiccough or vomiting; above all an evident desire to attract attention —these, or some of the other numerous and familiar signs of hysteria, would give the clue to the case.

The general signs of hysteria must be the main guide in the diagnosis of hysterical paralysis also. Fortunately such signs are almost always present, for without them the diagnosis of many paralyses would be very difficult. Many of the paralyses depending upon organic disease pass through stages where there are almost no symptoms or signs which could not be imitated voluntarily, or appear as symptoms of hysteria. Where hemiplegia involves the face and tongue, or where the history of the attack shows mental disturbance, a lesion of the brain is indi-

cated; but, if there be no history of cerebral symptoms, and the paralysis be confined to the arm and leg, the resemblance between hysterical and cerebral hemiplegia is very great, so far as the paralysis alone goes. The reflexes, both the superficial and skin reflexes and the deep tendon reflexes, behave in much the same way in the two affections, the deep reflexes being somewhat increased and the superficial ones almost invariably lost in cerebral hemiplegia, and quite often lost in hysterical. Hyperæsthesia may be present and furnish an indication of hysteria, and spasms of some sort almost always accompany or precede the hysterical attack. Duchenne thought that he had found a pathognomonic sign of hysterical paralysis in the peculiar electrical reactions, that is, normal contractions with the Faradic current, with great diminution of the electrical sensibility of the muscles. But the presence of muscular sensibility to the electrical current cannot be determined with accuracy and it is easily feigned. What is wanted is points of diagnosis upon which imposition cannot be practiced. It is not intended by this to imply that all hysterical cases are to be accounted for by perverted imagination or deceit, but it is in just these cases of paralysis where hysteria has to be differentiated, that subjective symptoms must be looked upon with great distrust, and purely objective symptoms sought for. Even the total absence of an object for the deceit should not be allowed to mislead, for the ways of the hysterical are mysterious beyond all understanding.

It is usually less difficult to determine the nature of a paraplegia than of a hemiplegia, because paraplegia depending upon an organic lesion, is almost always attended by definite physical signs.

The interesting young lady reclining in bed or an easy chair, cheerfully occupied with some light needle work, surrounded by sympathizing friends and the object of

constant attention from the neighbors because her lower limbs are totally paralyzed and she cannot stir from her position, at once excites suspicion in the medical mind that things are not what they seem. Investigation shows perhaps, the bladder and rectum undisturbed in their functions, no peculiarity of the reaction of the muscles to electricity, no signs of wasting, and the tendon reflexes not strikingly changed. This, then, is certainly not a case of transverse lesion of the cord. The normal condition of the tendon and skin reflexes shows that there is not even a lesion of the lateral columns, and the presence of normal electrical and reflex reactions, with the absence of atrophy, excludes likewise, that lesion of the anterior cornua called polio-myelitis anterior, which in children produces infantile paralysis. The physician now has a choice between explaining the state of the case and probably arousing the indignation of the patient, or of keeping his diagnosis to himself, encouraging the goose to lay for him the golden eggs of frequent fees until a prayer or faith cure or some other miracle is wrought in the case.

To carry out the principle that a diagnosis, when hysteria is suspected, should be made, as far as possible, independently of the patient's subjective sensations, often taxes the physician's ingenuity and various expedients have been devised to detect deception. A case of hysterical blindness in one eye was lately reported where the normal appearance of the eye made it certain that the patient was either deceived or deceiving, but she could not be convinced that she saw until a prism was put before the sound eye and she was told that she would see double. This she did, and on covering the sound eye, with the explanation that to see double she must have used both eyes, she was convinced that her blindness could not be real.

A good plan to pursue in hemilateral affections of sensation and special sense is to give a hypodermic injection

of pilocarpine. The production of sweating on the sound side alone will show that the disease is not feigned, but although real, it may be still none the less hysterical.

In neuralgias the symptoms are so entirely subjective that the physician has to depend almost wholly on the patient's truth and accuracy. In such cases the writer has obtained some comfort and assistance from the behavior of certain tender points under the constant electrical current. Such tender points usually, but not always, coincide with points sensitive to pressure, and can usually be found by a careful search. These points often show an astonishingly greater sensitiveness than is found in their neighborhood, and become painful under a current which cannot be felt anywhere else. By testing such points with the circuit closed, and again with the circuit broken, without letting the patient know that a break has been made, the possibility of deception can be avoided.

REPORT OF W. L. LINCOLN, M.D.

WABASHA, MINN., June 2nd, 1884.

WM. DAVIS, M.D.

Dear Doctor: Numerous distractions have prevented me from answering your circular. I hope other members will not so treat you.

My personal experience in "Hysteria" during the past year does not warrant me in presenting a single observation worthy of a place in the material of your address.

One case illustrates an item in the treatment, worthy of mention. Miss L., a young lady of 21 years. Menstration commenced at 16, always more or less painful. After a normal menstrual period was attacked with pain in region of ovaries, and severe hiccough, which continued with short interruption for two days, in spite of vigorous antispasmodic treatment. The fear of death if

left alone for an instant, and the apparent distress for breath kept her friends in a state of alarm, and the medical attendant from calm repose. The succeeding monthly period in October was too much like the preceeding one to make a succession desirable; but in November treatment was commenced with an emetic of 30 grs. of ipecac. pulv, and followed with as much warm water as the patient could be induced to swallow, she, at the same time, averring that there could be nothing in her stomach, for she had eaten scarcely anything for days. The result, however, was good. A large quantity of thick ropy mucous was ejected, and the patient, who had hiccoughed in a hysterical manner for four hours, was calmly sleeping in less than two hours from the time the emetic was swallowed. Whatever may be the explanation, there is no doubt in my own mind of the propriety of this treatment in the beginning of every attack of acute hysteria. It produces a more or less powerful impression on the whole nervous system; and, better, it prepares the stomach to appreciate such remedies as would be entangled in the mucous that is contained in that organ. We fill the stomach with albumen, "whites of eggs," to entangle poisons, and should we forget that mucous or undigested food will make medicinal remedies inoperative.

WM. L. LINCOLN.

REPORT OF A. B. CATES, M.D.

MINNEAPOLIS, Minn., June 18, 1884.

To DR. WM. DAVIS, St. Paul.

My Dear Doctor: As hysteria is the special subject for discussion this year, I would like to report a case which has attracted a great deal of attention from the profession of Minneapolis.

Mrs. G——, on the 18th of October, 1883, was walking

along a public thoroughfare in Minneapolis, on a defective plank-walk, when the end of one of the planks upon which she stepped tipped and caught her foot between it and the next plank. Thus she was held in a trap, in a fainting condition, and leaning against the fence until relieved by observers of her misfortune. By this accident she claimed to have strained her back and sprained her left ankle. She was taken to her boarding house, where she had a few convulsive attacks. No rise in temperature nor increase in rapidity of pulse was noticeable at this time by her attending physicians. A slight muscular tremor began to manifest itself, involving arms, legs and head. She was confined to her bed for ten days, and then began to walk, though stepping on the left side of her foot. The tremor still continued, as far as could be observed, and apparently was increased by voluntary movement. She complained of pain in her left ankle and hip.

On the 2d of November she came to myself, holding the office of city physician as I did, because of a determination to bring suit against the city of Minneapolis for damages. Patient was a tall, spare woman—a widow—who had been twice married, and was 47 years of age. She had been quite healthy during her life, though subject to slight nervous attacks while living with her first husband. I learned later that she had come to Minneapolis to make a start as a physician, adopting the specialty of magnetic and electric treatment. Previous to coming to Minneapolis she had acted in the capacity of nurse, giving massage treatment.

Physical examination revealed nothing of interest. The uterus was in a normal position, and the ovaries were not displaced or enlarged, nor sensitive to pressure.

She requested that I take charge of her case, thus tending to disarm any suspicion which I might entertain. I determined to do so, in order that I might have the best opportunity of forming a fair and unbiased opinion.

The tremor, after being closely watched, was found to cease during sleep and at times when patient was engaged in earnest and animated conversation. In a few weeks hemian æsthesia of the left side developed. Patient claimed that she had complete loss of motion in left leg, but it was found that she could move about the room by dragging this leg. At times the temperature of the left limb appeared to be less than that of the right, and later examination showed a slight atrophy of the muscles of the calf of left leg.

Mrs. G—— appeared to be unaffected by the galvanic current, but as soon as the Faradic current was used she invariably became nervous and excited, ascribing her sensations mainly to the noise made by the battery, Contracture of the left foot soon became apparent. This it seemed impossible to overcome; but once, while she was having a convulsive attack, it was found that this contracture had temporarily vanished. On another occasion she was requested to stand upright, and the heel, after considerable coaxing, gradually was brought down to the floor. Other symptoms complained of were headache, palpitation with infra-mammary pain, sensation of a girdle about the waist, neuralgic pains in different parts of the body, very marked constipation, diminished amount of urine, persistent nausea, and sometimes vomiting and ability to digest only the lightest food. Hallucinations in regard to images and voices were also noticed. Convulsions were occasional. During these attacks the pulse rate remained about as usual. At times patient complained of color-blindness and of smokiness before the eyes. At one time an opthalmoscopic examination made by Dr. Allport showed a slight congestion of the optic nerve of left eye.

At the second examination nothing abnormal was noticed. Notwithstanding this, in testing the field of vision, although she had had no difficulty in recognizing

every one who came into the room, she could not see a large white spot upon a blackboard, and could not even say that a blackboard hung upon the wall. When her eyes were closed she could hear the tick of a watch placed near her left ear for a longer distance (two inches) than she could on the right. The reflex excitability of the larynx was not abolished, as it is claimed to be by Chairon in every case of hysteria. There was no laughing or hysterical sobbing. A sample of the hand-writing showed it to be firm and regular. At one time, when patient was undergoing an examination, a proposal to give ether met with a flat and absolute refusal from her. The emaciation during the confinement to her bed was not marked.

When this disease was first manifested and our main symptom was tremor, it seemed impossible to exclude paralysis agitans. Later developments, however, readily threw this out of account.

Multiple cerebro-spinal sclerosis was also not so easily eliminated as would be now possible, in view of all the facts; indeed, so completely did Mrs. G—— disarm suspicion and excite sympathy that those who saw her early were very much inclined to that diagnosis. In its favor were the headache, the convulsions and the (at first) apparently complete hemiplegia, as well as the girdle sensation. (This last sympton was not complained of till patient was asked if she had it.)

Against that disease are arrayed several facts. They are: Its sudden onset and the absence of fever, nystagmus and defective articulation and marked emaciation. The hand-writing was not irregular and tremulous. The paralysis did not appear before the tremor, as might have been expected had the disease begun in the cord where it would have begun if resulting from the accident. The tremor was manifested at all times, and not particularly at time of voluntary motion. The contracture at times disappeared. The patient was able to get in and out of

bed, and even to walk about the room, dragging her left leg. There also seemed to be a deliberate effort to deceive in regard to sight and hearing. She would allow no advantage to be taken of her unconsciousness under ether.

During the month of April, 1884, about six months after the accident, the case came into the courts for trial. Mrs. G—— had sued the city of Minneapolis and the property-holder for $25,000. The physicians who had seen and examined her were present and testified. They were as follows: Drs. Whetstone, Eastman and Camp, for the plaintiff; and Drs. Abbott, Salisbury, French, Hunter, Allport, Hutchins, Stevens and myself, for the defendant. All of the physicians for the defense agreed upon the diagnosis of hysteria, while no two for the plaintiff testified alike.

A verdict of $2,000 was rendered. Immediately after the trial Mrs. G—— left town, and I have heard nothing definite of her condition since. Very truly yours,

A. B. CATES.

REPORT OF D. W. HAND, M.D.

ST. PAUL, MINN., June 4th, 1884.

WM. DAVIS, M.D.

Dear Doctor: I am sorry not to have been able to give you a report of some case of nervous disease, but at the last moment must say I could not find the time. In relation to your proposed subject, "Hysteria," I will remark that I do not see near so many cases of that disease now as I did in the earlier years of my practice, and I have been wondering if it might be due to the fact that the susceptible creatures think they cannot so readily "fool the old man."

Yours truly, D. W. HAND.

DISEASES OF CHILDREN.

ANNIE F. WASS, M.D., CHAIRMAN.

MEDICATED STEAM IN DIPHTHERIA.

BY C. G. SLAGLE, M.D.

In reply to your request for some contribution in this department for the State Medical Society, I can think of nothing of more importance than to urge upon the medical profession "A more thorough and extensive employment of medicated steam inhalations in the treatment of the graver forms of Diphtheria."

In view of the very many almost fruitless, and often conflicting, statements that have been made in our medical journals and societies within the last few years, in regard to the most rational treatment of that dreadful scourge diphtheria, and seemingly with so little real advance in our therapeutical management of that disease, it would not seem strange if some impatient and discouraged brother should exclaim in his blank despair of progress: "Give us rest!" But since we cannot rest in security while death is so constantly claiming its victims all around us from this dreadful enemy of our dear little ones, I may perhaps be excused for thus urging upon my medical brethren what I sincerely believe to be an advance in the right direction to the management of this fatal malady.

Since 1861 I have had opportunity of observing and treating (more or less every year) some of the types which I have recognized as belonging to either the one or the other of the forms described by Mackenzie, viz.: 1st—the "Catarrhal," 2nd—the "Typical," 3rd—"Inflammatory," 4th—"Malignant," 5th—"Gangrenous," 6th—"Chronic."

During the period specified have seen well-marked examples of each of these varieties, though more often they have mixed or mingled so that it was difficult to determine under which of these forms individual cases should be classed. Still in different epidemics one or the other of these forms have been most prominent, and has not seemed to have been modified by either season of the year or climate,—as observed in Louisville, 1860-61; Missouri, 1861-2; Philadelphia, 1863-4; Ohio, 1864-5; Iowa, 1867-8; Minnesota, 1868-84; and embracing all seasons of the year.

At first (in Louisville, Ky., 1860-1) we were taught to cauterize with (stick) argent nitrus and swab throat with tinct. ferri, murias, etc., etc. Under such treatment I lost eight of ten of my first cases. I then procured the "prize essay" of Dr. D. D. Slade, of Boston, and found about the same treatment recommended. We very soon, however, discovered that the old women, quacks, eclectics, and even the homœpaths were having better success than we Galenics, from which we readily inferred that our own treatment was too strong and heroic, and hastened to adopt milder local measures; and from time to time since have watched and adopted the gradual modifications of treatment recomended by the most able teachers in various parts of this country and Europe, and am prone to confess, with very little improvement in results (in grave cases) until within the last two or three years; and while I confess to have somewhat modified my general treatment within the last mentioned period, still I am forced to believe that whatever better success I have achieved has been mainly due to my increasing reliance upon the thorough employment of steam atomizers, and in which I now have as much confidence as is reposed in it in the treatment of whooping cough in the New York Foundling Hospital, and by Prof. J. Lewis Smith, (see Smith on Diseases of Children: Article "Pertassis.") You

may be ready to reply that the employment of the "steam atomizer" is not generally practicable, and especially when an epidemic prevails. I can only say that an agent of so much importance (indeed I verily believe in many cases indispensable to success) can, if not always, at least generally, be procured. If each physician would keep only two or three on hand for the poorer class and request each family (where they can afford) to procure one, we could generally manage to secure them, at least for our worst cases, and the milder cases do not absolutely demand such treatment, although, where at all practicable, I shall urge you to treat every case of pure diphtheria with the steam spray.

The cost of a fair atomizer is now only about $3, which will answer every purpose where economy is a necessary consideration, although the most durable and satisfactory instrument whice I have used is "Codman & Shurtleff's;" costs about $4.25.

I have for years endeavored to educate my patrons to understand the fact that a *good rubber syringe* is *indispensable* in every well-regulated household; and I now add a good *steam atomizer* also as applicable in the treatment of nasal, laryngeal and bronchial catarrhs, tonsilitis, croup, whooping cough, diphtheria and some forms of chronic pulmonary affections, always of course under the supervision of the family physician. How far the steam alone contributes to the favorable results in these affections, and especially in diphtheria, I have not ventured to determine, although it probably constitutes a large factor in the relief and cure. Have employed with apparently about equal success various remedies to medicate the steam, notably lime-water, listerine, iodoform, bi-chlor. hydrogen, turpentine, sulpho-carbolate of sodium, boracic acid, carbolic acid, tinct. iodine, chlorate potassa, alcohol, etc. If any preference, it will be for lime-water, listerine, iodoform, turpentine and hydrogen bi-chlor. Have generally

employed the steam spray to throat about once in two or three hours, about ten to fifteen minutes each time, for period of two or three days, or until symptoms yield.

Have seldom found any trouble to induce children to use the steam; indeed, if you brush the throat once or twice they will generally gladly accept the steam under promise that you will desist from further brushing. Have generally found it soothing and agreeable to the patient, and very few persons are so awkward or ignorant that you cannot teach them by one application yourself to employ it successfully during your absence, and which they can seldom do properly with the old system of brushing the throat.

If, then, the application of medicated steam to the throats of children in diphtheria is really, as I shall here claim, more easily accomplished, more agreeable to the patient, much more effectual in subduing the disease, and at the same time generally available at a small outlay, there is every reason, it seems to me, for adopting it in all grave cases, at least, of this very stubborn and fatal malady.

I have no disposition to attempt to champion this as a new doctrine or treatment, as it has been again and again recommended by different physicians in various parts of the country. I only desire here to urge upon my professional confreres the importance of adopting this method of treatment more generally than has heretofore been done. Every physician well knows the difficulty which we have always experienced in swabbing or even brushing the throats of children in diphtheria, and that from the very difficulty with which we have generally to contend, our efforts have generally resulted in failure to a very great extent. The terror to the little patient as well as the torture in many cases, the awkwardness of those delegated to perform it during our absence, and even the difficulty which we ourselves often encounter in our attempts

to brush the throat, furnish a very strong incentive to seek some more agreeable and effectual method; and in the steam atomizer we find such.

If asked "what will the steam accomplish in these cases?" would affirm that it will control the inflammation of the throat, limit the exudate and promote its detachment, prevent its reformation, allay distress and difficulty of swallowing, retard absorption, calm nervous irritation—and thereby preventing or modifying the severity of the attack, and thus conducing greatly to the favorable termination of the case.

"Will you do nothing only spray the throat with medicated steam?" Yes, of course; endeavor to meet all other indications not met by the inhaler by the most approved therapeutical means, and best possible general management of each individual case. But all this will not suffice, in very many cases, without the diligent aid of the atomizer, which, while it will not, of course, save all cases, will, I am sure, if properly employed, reduce the mortality greatly below that of any treatment adopted without its aid.

Have saved more than half dozen very grave cases within past year which I am as sure that I could not have saved without the aid of the atomizer as one could possibly be sure of anything in an art which is predicated upon candid judgment and careful experience.

There have been well marked cases of laryngo-tracheal diphtheria which I have found almost universally fatal without the aid of the steam spray. I can not but believe, from my late experience, that the atomizer, if early and persistently employed, will supercede the necessity of tracheotomy in many cases.

Would like to report a few cases in detail, but having prolonged this communication to all justifiable limits for such articles, I must refrain at present.

Report on Opthalmology.

JOHN F. FULTON, M.D., CHAIRMAN.

FUNCTIONAL DISEASES OF THE EYES.

BY JOHN F. FULTON, M.D.PH.D.

This is a subject upon which I have been collecting material for some years, and to which my attention is constantly being directed by cases occuring in private practice. So I am glad of this opportunity to present it to the consideration of the profession.

The relationship of diseases of the eyes with those of the nervous system is close and intricate, a fact which becomes more and more apparent as these maladies are investigated and better understood. Those who make an especial study of the nervous system are aware that there is a large class of cases which come under their specialty affected with a trouble, the pathology of which is not known, which is manifested only by symtoms, which they call functional disease. The fashionable term of the day is *neurasthenia*. We also frequently hear the more ambiguous terms: nervous weakness, nervous debility and spinal weakness. Every oculist of extensive practice meets with many cases of occular difficulties of a similar nature. Although many attempts at classification have been made, yet I prefer to put all such under the head of functional diseases of the eyes. An ophthalmoscopic examination reveals no organic disease of the nerve or ocular

tunics. There may or may not be some refractional error. There is usually some insufficiency of the internal recti muscles and evidence of slight muscular paresis. As remarked above various terms have been suggested for the trouble. It is not correct to speak of it as asthenopia, which Douders has classified scientifically into muscular and accommodation, dividing the former into hypermetropic, myopic and astigmatic, showing that the asthenopic troubles are dependent on the muscularstrain of overcoming the erorr of refraction. Neither are such terms as asthenopic atonica, neuristhenic anesthesia of the retina, and hyperasthesia of the retina; these contradictory terms being caused by increased irritability being prominent in some cases, and decreased functional activity in others. Retinal asthenopia, congestive asthenopia, and astigmatic exhaustion are other terms equally unsatisfactory. The number of people suffering with the misfortune of which I speak is very great, and the number seems to be rapidly increasing.

The two chief factors in the production of this disease is the so-called nervous diathesis and the intense civilization of the present day. The printing press, while it has done much towards the elevation of mankind, has also, by its abuse, done much to impair good eye-sight. Every one is ambitious to be intelligent; in order to be even moderately so it is necessary to use the eyes extensively. So among the poorer classes the eyes are kept constantly at work on poor paper and poorer print. This also suggests the "oceans of dailies" which are placed at our disposal every morning, which are usually read in the morning before breakfast, when the body is weak and the eyes are weaker, containing reports of markets and stocks of great importance to the business man, exciting details of murder, accidents and calamities from all parts of the world, reported as quickly as though occurring but a few squares away. The point I wish to make is that the ma-

terial is of such a nature as to absorb the mind so that it ceases to be aware of the severe tax on the eye. And when we look at the world of fiction we can see at once another source of trouble, the contents of which is calculated to work the interest of the reader up to the highest pitch, leading him on from chapter to chapter, deepening in interest.

All these act as mere stimulants; the result is reaction, which is depression. The eyes are robbed of the nerve force necessary for the mechanical and physiological action, and have had their muscles strained and exhausted by prolonged application. I recall one case which enjoyed perfect sight up to the time of the great Beecher trial. Every night by a poor light she read the reports of this exciting trial. By so doing she strained her eyes and brought on this functional trouble of which I speak, which rendered it impossible for her to use her eyes with satisfaction for some years.

Our processes of education, too, are a potent factor in the production of functional troubles of the eyes. A large number of the cases are boys and girls at school. The rapidly increasing number of studies in our various colleges, together with constant examinations, competitive in their nature, and the want of proper exercise and hygienic surroundings, make it quite evident why this should be so. Without attempting to suggest a remedy, I simply refer to the subject as one of the most important factors in the etiology of the trouble of which I am speaking.

Study the American life as closely as you will, and it will be found to be one of constant excitement. This, together with its results, has been pointed out by a number of thoughtful foreigners who visit our shores. The frequently recurring political campaigns, together with the flood of literature and the various religious excitements, while they are subjects which can only be hinted

at here, have a most important relationship to the theme which it has pleased your committee to present to your consideration.

I refer thus to diseases of the nervous system because this condition is characterized by symptoms related not only to the optic nerve, but by analagous and equally important one, to various organs through the train of sympathetic nerves.

The patients come to us one day complaining of the pain being located in one locality, the next day in another. Now, I look upon these functional disturbances of the eye as but the local expression of the nervous diathesis, and can be explained on the same pathological basis, which, according to Beard, in his great work on Neurasthenia, is an impoverishment of nerve force, caused by undue waste of nerve tissue. All stimulants produce increased action, this in its turn is followed by depression. The excessive demands made upon the eyes by our modern mode of living and amusements, and processes of education, while it must necessarily produce muscular weakness, at the same time arrests the nerve elements, thus resulting in functional and organic disease.

Speaking of the influence of the mind over other organs recalls an illustrative case. A lady, pale and anæmic, married, had inherited neurotic trouble, one of her family being an epileptic; when a young girl she had been chlorotic; spirits very much depressed. She managed to get to the office, but feared that she could not stand the light, of which she had a great dread. A careful examination revealed no trouble with the back ground whatever. Her distant vision was normal and the accommodation good. I found that she was very slightly hypermetropic, but was using concave glasses constantly. When I asked her how many hours a day she could read, the very idea seemed to horrify her, saying that if she

would read but for a few moments she would suffer hours of pain, that she was comfortable only in a dark room, and gave her eyes no exercise.

Neither the patient or attendants seemed to entertain any hope of recovery. My orders were to throw away the glasses, to spend as much time as possible in the open air, and to commence systematic exercise of the eyes every day and evening. At the same time I gave her the most positive assurance that she would soon recover, as it was only by so doing that she could be induced to try the experiment. The results were very happy and gratifying —a speedy restoration of complete vision, and grateful patient and friends.

The most prominent symptom of functional eye trouble is inability to use the eyes for any length of time at near work. There are many people who have perfect health otherwise, but never can use their eyes with comfort, not even to read the morning paper or the letter of a friend. Frequently the only trouble we are able to find is slight insufficiency of the internal recti muscles. Associated with this we sometimes have spasms of accommodation showing that there is a lack of nerve force necessary to perfect fixation.

All the symptoms when collected together, which make a perfect picture of this disease, indicate a disturbance of the nervous apparatus of the visual organs. The muscular lassitude often met with in these cases is another indication of the same trouble. This phenomenon shows itself in the form diplobia, slight ptosis, indifferent carriage of the body, indolent expression of the face, feelings of nervousness of the extremities, sometimes giving rise to serious apprehensions of organic disease of the vital nerve centers. I have also noticed partial dilation of the pupils in a few cases.

With this weakness of body will be observed marked interference with cerebration. The patient is abstracted,

forgetful, dreamy and indifferent as to surrounding objects and events. The mind seems to lose its power to register the ocular impressions.

Wilbrand reports a case:*) "He complained that his business was injured by the fact that the faces of people with whom he had just finished business transactions would in the space of a few moments entirely escape his memory. If he happened to meet these people on the street only a few minutes after they had left his store he would pass them by without any more recognition than if he had never before seen them. The patient was slightly hypermetropic and complained of many nervous disorders, and recalled to mind that he had always been dreamy.

A preliminary survey of the subject indicated that hysterical amaurosis and amplyopia with hemi-anæsthesia would occupy considerable of our report. But more matured consideration and investigation of the literature of the subject led us to believe that while the French authorities have observed a number of cases and a few have been reported in recent American literature, yet the data is not sufficient to make a positive differential diagnosis.

Another prominent symptom which alarms these patients much is sudden diminution of vision. It comes on suddenly after they have been reading for some time or looking at some object of interest in the distance. It is due to a number of causes, such as cerebral inactivity, spasms of accommodation, a relaxation of the muscles of fixation. The acuteness of vision varies from day to day and hour to hour. While using their eyes for close work a sort of mist seems to fall over their eyes; this clears up and becomes denser spasmodically. It is difficult to explain this phenomenon, for during the attack the media remains perfectly transparent, and the background is always found to be healthy.

It has often occurred to me, as it has been suggested by

*) Arch. Opthalmology.

Mooren, "that transitory œdema originating in vaso-mater disturbance may interrupt the conduction of light towards the cortical centers, or that as a result of over-weariness the excitability of the optical nervous system decreases to such an extent, that with all the external circumstances precisely similar, such images as are not brilliantly illuminated, and particularly those that fall upon the periphery of the retina, make a blurred, indistinct impression."

But such explanation draws largely on the imagination, and we are strongly reminded of the remark made by my friend Dr. Riggs, that by functional nervous diseases we mean those concerning whose nature the microscope and the scalpel gives us no information. We know them by their symptoms, not by post mortem evidence.

There are two symptoms which the ophthalmoscope usually shows in these cases. First, an eye that rebels against the examination; second, an irritated condition of the optic disc and retina. So constant are these symptoms that I have them closely associated in mind with all cases of neurasthenic asthenopia. The objective symptoms are much more numerous, such as ptosis, spasmotic squint, hallucinations of vision, colored mist, obscuration of the acuteness of vision, protophobia, temporary contraction of the field of vision, and many other.

TREATMENT.

I do not think that any class of cases are more greatly neglected or more completely misunderstood than those which come under the classification of this paper. It is only too common for these cases to be examined by oculists and found aurætropic and dismissed, their troubles being looked upon as too trifling to be regarded when they are sufficient to make the life of the individual useless and miserable. I am convinced that much can be and should be done for them. First and most important is a correct diagnosis, that is, to find which organ is the primary seat

of trouble and the source of irritation. Beard was in the habit of treating these cases in consultation with a gynæcologist and oculist, and it not unfrequently requires the combined efforts of these three specialties to successfully diagnose and relieve a bad case of neurasthenic trouble.

As some one has said, many of these cases are wearing pessaries in their vaginas who should be using glasses on their eyes; and just as many are using glasses who should be using pessaries; and quite a number are not using either who should be using either one or the other. When I am convinced that the eyes alone are at fault I feel certain that I can relieve my patient. The first thing to do is to put the eye at physiological rest, the same as the general surgeon puts the sprained joint or the fractured limb. We do this by means of atropia.

Under the influence of this potent remedy it is extremely gratifying to notice the disappearance of the irritation of the conjunctiva, the protophobia and the spasm of accommodation. In a few days or weeks, as the case may be, the oculist is able to make an examination with perfect satisfaction, and can notice from day to day marked improvement in the asthenopic symptoms. After the irritation has been removed it is a great mistake to order the patients not to use the eyes; they should immediately begin systematic exercise. Darkened rooms and total abstinence as to reading and near work acts as poison to these cases.

If any error of refracture exists, it should of course be carefully corrected, always under atropia or some mydratic, as by so doing only can the exact focusing power of the lens be obtained; and this last strain may give very great and constant annoyance keeping up local and reflex cerebral irritation. I have known in more than one instance individuals to have helpless organic diseases of the brain diagnosed by able and competent physicians when the whole trouble was the constant spasm of the cil-

iary muscle in a highly nervous person. I have repeatedly relieved the most annoying and persistent headaches in the same way.

The therapeutic agent in which I have the most confidence is electricity in some form to restore the lost nerve force and stimulate the contractibility of the muscles. Faradization is undoubtedly beneficial and the galvanic current is productive of good results. Some patients are so delighted with this treatment as to call it their "temporary savior."

The kind of exercise which should be ordered is that which combines light, physical exercise, with something which will at the same time exercise the mind, As this is a trouble dependent upon deficient nerve and muscular action, systematic exercise of both is essential to success. In those cases in which vaso-mater disturbances are prominent, the inhalation of nitrate of amyl seems indicated. In fact, Wilbrand has reported cases which have been benefited by this remedy. His theory is that the symptoms of obscuration of vision, etc., are caused by anæmia of the retina, and the nitrate of amyl causes dilation of retinal blood vessels, and thus removes the trouble.

There is a domestic remedy in which I have great confidence, namely, the cold water douche, applied freely every morning, followed by the brisk application of the rough towel.

THE IMPORTANCE OF EARLY TREATMENT IN SOME OF THE COMMONER FORMS OF EYE AND EAR DISEASE.

C. WILLIAMS, M.D.

That all diseases of the eye and ear, from their intrinsic importance, require early, intelligent, scientific treatment, goes without saying; but I wish more particularly to call the attention of the profession to some of the commoner forms of those disorders which are occurring every day in the practice of the general physician, and where, from the very fact of common occurrence, they are often neglected. The arduous requirements of general practice are such that the physician so engaged cannot be blamed if he fail to keep abreast with the advancement of medical science as appertaining to the various specialties into which the science and the art of medicine is now resolved; since, if he attempted to do so, even he would find that more than his full time would be required to be given to study, with no time for original research or the practice of his profession. The members of the Society then, will pardon me, I hope, if I presume to call attention to some of the commoner affections of the eye and ear which my experience has taught me are not always treated as promptly or as well by the general practitioner as their immediate and potential importance demands. First and foremost, then, purulent inflammation of the middle ear, whether old or recent, or in whatever stage, is a constant menace to the life of the individual. This is a statement which cannot be gainsaid, nor does it need qualification. It matters not whether the inflammation be the sequel of an eruptive disease or whether it may have arisen spontaneously from cold or whatever cause. The existence of

a discharge from the ear indicates a condition which may at any time give rise to complications which shall result in the death of the patient.

I am perfectly aware that there is not a physician in this room who doesn't know of one or more cases where a running from the ear has existed for a very great while, and where the condition has come to be accepted by the patient, and may be by the physician, as the normal one of that patient. It is also quite as probable that there is not one of you who cannot recall the case of some person within your knowledge who, having had a purulent inflammation of the ear, has been more or less suddenly seized with a disorder having the likeness of meningitis, pyæmia, septicæmia, cerebral abscess, and has died.

A lethal result is particularly to be feared in children who have a purulent otitis from any cause, but especially as a sequel of scarlatina, measles, diphtheria, etc. Propagation of the morbid process to the envelopes of the brain and the brain itself, for anatomical reasons, is more than apt to occur. This same extension takes place in adults in the same manner, but again for anatomical reasons, not with the same frequency.

It is probable that no child under five years of age who has an acute inflammation of the middle ear escapes a meningeal complication, the intensity of which depends upon the severity of the disease, the treatment, etc. As indicative of how frequently such cases are considered as a primary affection of the meninges, I once listened to a paper by a learned member of the profession, a professor in an Eastern college, who intellectually has few superiors in the profession anywhere, entitled "Two Cases of a rare form of Cerebral Disease in Children." Two typical cases of acute inflammation of the middle ear were minutely described, with the treatment coincident with the crisis in each case. As a part of the clinical history, it

was stated: "Some otorrhœa was established which in a few days became profuse, and convalescence at once began," which is usually the case.

The oft' made remark that there are few healthy kidneys going about may be remodeled, and we must say there are fewer normal ears to be found. This watch should be heard in a still room by a person with average to good hearing at least twelve feet. There are very few in the room who have average hearing.

The cause of defective hearing in nine cases out of ten is due to chronic middle ear catarrh. This disease is insidious in its approach, and in the great majority of cases the disease is far advanced before any systematic properly directed treatment is attempted. In the earliest stages of the disease correct treatment will, in the by far greater majority of instances, cure the affection, or at least arrest it. In some cases, and very sad ones too, I am sorry to say, nothing can be done, failure being almost always if not invariably due to the extensive organic changes which have come about in the delicate tissues of the middle and even the inner ear. Dangerous complications in acute and purulent inflammations of the ear, while relatively rare in the East and South, are not, so far as my experience extends, rare in this climate; while chronic aural catarrh, which so often leads to impairment of hearing, is exceedingly common.

Of affections of the eye, where early and appropriate treatment is most imperatively demanded, iritis perhaps comes first, and then glaucoma. While it does not happen that the neglect to properly treat an iritis in the beginning exposes the patient to danger of death, as in the case of an acute inflammation of the middle ear, it is true that such failure entails prolonged suffering, and may eventuate in very serious impairment of vision. together with other remoter damaging sequelæ. Glaucoma,

though relatively rare as compared to iritis, is common enough, and if treatment is to be of avail it must be had in the earlier stages of the disease. Failure then to act promptly in the beginning means irremediable blindness to the patient; and since glaucoma sooner or later attacks both eyes, the loss of sight is total. Cases of glaucoma often come to the specialist only when the second eye has become affected, too often, indeed, after hope of curing the disease, or even checking it in the better eye, is past. The prognosis which he is obliged to give will sometimes expose him to unjust criticism, and if he refuse to operate in what he knows to be a hopeless case, his motives are misinterpreted.

The scope or intention of this paper is not such as to have permitted even a very abridged description of any of the few forms of disease which have been mentioned. My desire has been to accentuate the importance of early treatment—special treatment if you will—in all diseases of the eye and ear, but especially in those forms of disease which are more common. It will, of course, be seen that I have not enumerated them all, but have, so to speak, only drawn a few straws from the sheaf.

In closing I will briefly point out a few prominent symptoms which are important, and some salient points of treatment that are valuable.

In ear disease tenderness, and especially redness and tenderness over the mastoid, meaning as it does inflammation of the bone and periosteum, should always be met by a free incision down through the periosteum to the bone. The sight of election is usually about one-third of an inch behind the attachment of the auricle, and it should extend from near the tip of the mastoid process to about the level of the upper margin of the auricle. This is called Wilde's incision and has saved many lives besides untold suffering. It should be made early in the disease, as soon, in fact, as there is any indication.

In children, and where there is necrosis of bone, the knife should be guarded, since it is possible to enter the cranial cavity direct.

The therapeutic measure of greatest importance in the treatment of ear disease is complete cleanliness. It will not do to trust this matter to the patient or his friends. This is eminently important in children. The neglect to properly cleanse the ear of the decomposing pus and epithelial detritus favors extensive destruction of the membrana tympani and also extension of the disease to the mastoid and the brain. Simply syringing will not do all that is necessary. The ear must be illuminated and the adherent pus and detritus removed with the cotton holder and absorbent cotton. Keep the external meatus closed with a cotton plug, frequently removed and renewed. In the acute stage of middle ear inflammation apply from two to a dozen leeches in front of the tragus and over the mastoid, according to the strength of the individual and the urgency of the case. A full dose of an opiate may be given. Keep the patient quiet.

In an inflammation of the eye with marked circumcorneal injection, with a small or sluggish normal sized pupil, always use atropine; dialate the pupil fully.

If a patient apply to you with an inflamed eye, with pain, and a large pupil which does not react or reacts very poorly to light, no mydriatic having been used, suspect glaucoma at once; examine the tension, his field of vision and consider the case as one of great gravity at any rate. It may be serous iritis; it may not be glaucoma, but the chances are that it is.

REPORT OF P. A. HEITZ, M.D.

HASTINGS, Minn., May 7, 1884.

J. F. FULTON, M.D.

Dear Doctor: I send you notes of a case of retinitis nyctalopica which occurred here last June:

Michael G., an active boy of eleven years, of nervous temperament and always healthy, had for three or four days complained of pain in his head. On the morning of June 5th, immediately upon rising from his bed, he exclaimed: "I can't see good!" and consequently was kept from school. His mother now remembered that some weeks previous, while crossing the street, he, without obvious cause, stumbled and fell. Being reproved for his apparent carelessness, he made the same reply, "I can't see good." His teacher being interrogated, stated that he had observed that he looked with more than usual intentness at objects presented, and winked much oftener than common. Inquiry now elicited the fact, that for the purpose of ascertaining the comparative endurance of light, he, with some of his companions, had gazed directly at the sun.

June 6th. He cannot see distinctly articles on the dinner table; all shrouded as in a mist.

7th. Complained of deep-seated pain in the forehead.

8th. First seen by me this day. Gait, carriage and position of head was that of an "amaurotic" person; expressionless eyes and face, eyelids opened to their utmost extent, and pupils somewhat dilated. Ordered confinement to a dark room, cold compresses to eyes and forehead stimulating pediluvia, and a very brisk cathartic.

9th. Vision a little improved; sees the door knob; also "sparks" in his eyes. Continue.

10th. Still improved. Iodide potassa, three grains five times daily.

11th. Improving. Continue. Apply dry cups to temples.

12th. Improving still. Blister behind the ears; cups to temples and continue potassa iodide.

14th. Can see letters, singly, of ordinary type of school books. Continue treatment as before.

16th. Discerns words and reads a little. Repeat dry cups and continue potassa iodide.

By this treatment and regimen, with mild and nutritious diet, with gradual introduction of strong light, the patient made rapid recovery to a condition apparently as well as before.

This is the only case of the eye I have had of any interest within the past year. We send them all to you for treatment.

Respectfully,

P. A. HEITZ.

REPORT OF J. W. CHAMBERLIN, M.D.

ST. PAUL, MINN., June 13th, 1884.

JNO. F. FULTON, M.D., Chairman.

Dear Doctor: I herewith enclose reports in brief of a few cases which may be of interest to the members of our Society. Having been absent during the greater part of the year that has elapsed since our last meeting debars me from reporting as many cases as I otherwise might, but such as I report I trust will be interesting to the general practitioner of medicine. In the report of such cases as I was unable to observe during their entire courses I shall use the notes on our record book.

Case No. 1—Is that of a perforating injury of the eyeball, with lodgment and retention of a f. b. in the eye. Patient A. G., aged 22 years, came to our office Mar. 11, 1883, with a history as follows: February 10th previous,

[illegible] floor of the fundus, and when the eye was [illegible] the object would float in the vitreous. A few [illegible] it became encysted and seemed to have [illegible] to the floor of the fundus where it was [illegible] Patient was allowed to go home with [illegible] to return at once if any symptoms of [illegible] themselves in this or the other eye.

[illegible] returned Dec. 22d, ten months after the [illegible] There were no symptoms of [illegible] the injured eye [illegible] The ophthalmoscope [illegible] The latter seemed [illegible] Patient [illegible]

brought the case here for consultation about ten days after the injury. When she came here almost every tissue of the globe was undergoing a violent inflammatory attack, suppuration had supervened, and both the anterior and posterior chambers were full of pus. There was also a considerable amount of pus in the fundus.

In the left eye there was a slight circum-corneal injection, but no perceptible tenderness on pressure. S. V.= 6-6ths or 20-20ths. The injured eye was eneucleated witnout delay. The patient made a rapid recovery, and all unfavorable symptoms in the remaining eye rapidly disappeared. Its vision was not in the least impaired, and at the present writing is perfect.

Case No. 3—Is one of acute glaucoma. Patient, Mrs. P. M., age 45 years, consulted Dr. Thompson first at Faribault, Jan. 20, 1884. She was suffering intense pain in and around her right eye and the right side of her head; had been vomiting and was in a very nervous and excited state. The eye, upon examination, showed symptoms of acute glancoma. There was great distension of the ciliary vessels; the anterior chamber was much diminished; the pupil very sluggish and S. V.= only counting of fingers at 12 inches, T = X 2.

An immediate operation was advised to which the patient refused to submit as this was her only eye, the left one having been eneucleated some three years previous for a trouble which the patient averred was exactly like this one. Patient would not submit to any operation and went home. Ten days later she came to St. Paul and wanted further advice. The condition at this time was very much aggravated and matters were constantly and rapidly getting worse. The pain was almost maddening. She was so weak and prostrate from her intense sufferings that she was scarcely able to walk. S. V. had fallen until she was no longer able to count fingers, T=X3, or strong hardness.

Operative measures were again advised to which she consented and was sent to St. Joseph's Hospital. A large, free iridictomy was made, and five hours subsequent all pain and vomiting ceased. The patient immediately began to rally; her appetite which had deserted her some days previous returned, and she had the first rest that had come to her for many days. From this time her recovery was rapid, and in two weeks her vision returned sufficiently to enable her to read coarse print. Four weeks later she was able to read ordinary newspaper print.

And now perhaps, a few words on the much written up subject of glaucoma may not be out of place. It is a subject which has occupied the attention of the thinking men in the profession for a number of years, and the immortal Von Græfe was the first to throw any valuable light on the subject.

To-day we are employing the same remedial measures he used years ago with results in many cases most brilliant. Van Græfe did not know why an iridectomy arrested the progress of the disease; he had no correct theory in regard to it, but to-day every man of any note has a well-written theory of the cause and progress of glaucoma.

One of our great writers says the very name "glaucoma" is silly; it signifies nothing and only serves to veil with a learned name our ignorance. The word glaucoma means green cataract. It was probably called that from the fact that occasionally in glaucoma the pupil is green. It is, in this respect, however, a misnomer as not all cases of glaucoma have a green pupil; and, on the other hand, not always is there glaucoma present when there is a green pupil. I might write of different theories indefinitely, but what I purpose to do is to embody in this article the latest and what I consider the most reasonable the-

ory. For this theory I think we are indebted largely to Mr. John Tweedy of London, who, after a great many years of careful study and research, and with the most excellent advantages for observation and personal investigation, has written an elaborate essay upon the subject. The substance of it is as follows: "The peculiarity of glaucoma is increased hardness of the eyeball, due to an accumulation of the fluid contents of the globe, resulting from diminished elimination. The physical state which causes this is a narrowing or obliteration of the corneo-iridian angle of the anterior or aqueuos chamber. * * * In this angle is a delicate meshwork of fibers formed by the continuation of the membrane of descemet on to the iris. The membrane of descemet breaks up at the periphery into delicate fibers which anatomists designate as the ligamentura pectinatum iridis. These fibers are known to be lined by epithelial cells and to open into lymphatic spaces called the spaces of fontana. These spaces in their turn communicate with the canal of Schlemm which forms a vascular plexus around the cornea." In the natural state, the fluids which are secreted by the ciliary body, and perhaps by the posterior surface of the iris for the nutrition of the lens, find their way from the posterior chamber into the anterior chamber, and having served their purpose, escape through the spaces of fontana, thence into the canal of Schlemm, from which they are finally carried away by the anterior ciliary veins. Naturally as long as the spaces of fontana and the adjacent vascular canals are unobstructed, the fluids secreted by the ciliary body find their way out of the eyeball, and the equilibrium between secretion and elimination of the anterior segment of the eyeball is maintained.

Now, in a large number of eyes this equilibrium is disturbed. The secretion goes on while the elimination is diminished or arrested, and hence the accumulation occurs which sooner or later gives rise to increase of intra-

ocular contents manifesting itself by increased hardness. Now, in true glaucoma this elimination is checked in consequence of the periphery of the iris being pushed forward, and it may be, actually united with the cornea, so that the fluids which are still secreted by the ciliary body cannot make their escape through the drainage apparatus at the angle of the anterior chamber. This accumulation after a time sets up irritative changes, as all accumulations do, which may proceed, either abruptly or gradually, to inflammation or so-called glaucoma.

The anatomical condition of true glaucoma is therefore a shallowing of the anterior chamber, preventing the escape of fluids through the meshwork at the corneoiridean angle. Much has been written about the use of atropine and eserine, and many elaborate articles have been written advocating the use of each when there is intraocular pressure present. I think, however, the theories narrow themselves down to the following: Atropine lessens intraocular pressure, first, in a healthy eye, with a natural anterior chamber, by contracting the radial fibres of the iris, diminishing the calibre and contents of the choroidal, ciliary and iridian vessels, and lessening the amount of secretion of the eye; second, in acute iritis, with effusion and adhesions between the anterior capsule of the crystalline lens and iris by contracting the distended blood vessels and emptying them of the accumulated and stagnant blood by dilating the pupil and diminishing the bulk of the ciliary body and the iris, by lessening the secretion, favoring absorption of the fluid inflammatory products, checking cell proliferation and the transmigration of leucocytes, by breaking down adhesions and opening up communication between the anterior and posterior chambers, thereby liberating the pent up fluids and permitting them to make their escape through the canals provided for that purpose.

On the other hand, atropine *increases* intraocular pres-

sure when the anterior chamber is shallow and the periphery of the anterior layer of the iris lies near or touches the posterior layer of the cornea so as to obstruct the orifices of the spaces of fontana; secondly, in some cases where the anterior chamber is deepened by effusion, as in agno capsulitis. Its action here, however, is uncertain and variable.

The effects of eserine, like those of atropine, vary with the condition of the corneoiridian angle. Eserine lessens intraocular pressure when the anterior chamber is shallow, provided the iris be not actually or firmly adherent to the periphery of the cornea. So long as the iris is free to move, contraction of the pupil pulls upon the breadth of the iris, flattens its arch, and tends to draw it away from the cornea, thereby widening the corneoiridian angle and allowing the escape of fluids through the spaces of fontana. Secondly, in some cases of aquo-capsulitis, by pulling upon the delicate fibres at the angle of the anterior chamber and tearing some of the adhesions which cover and close up the orifices; as in case of atropine, however, the action of eserine in aquo-capsulitis is considered by most writers as uncertain and variable. Thirdly, in some cases of inflammation or ulceration of the cornea, especially when the ulceration is marginal.

Now, again, eserine *increases* intraocular pressure slightly and temporarily in the healthy eye by determining blood to the ciliary body and iris and thereby increasing their bulk. Secondly—In iritis by increasing the quantity of blood within the eyeball, enlarging the iris and ciliary body, stimulating the inflammatory processes, and favoring the effussion of lymph and other inflammatory products.

Now, it will readily be seen that under certain conditions the action of atropine is diametrically opposed to its action under certain *other* conditions. And of course this is as readily observable in the action of eserine, and

it must not be forgotten that an eye already predisposed to glancoma is often ruined by the too free and persistent use of those drugs, when the exact condition is not understood or is overlooked. We cannot be too careful in studying *all* the symptoms and taking into consideration all the attendant circumstances of this dread disease. In regard to operative measures nearly all agree that an iridectomy or sclerotomy is the best possible procedure. Each operation has its advocates, with, I think, a majority of all in favor of the former. In making an iridectomy the amount of iris removed bears no relation to the amount of relief given, the chief indication being to remove a portion as far back towards its root as possible, thus leaving little or no tissue behind to be pushed forward and obstruct the spaces of Fontana, and making free communication between the posterior and anterior chambers.

Yours very truly,

J. W. CHAMBERLIN.

MEDICAL EDUCATION.

D. W. HAND, CHAIRMAN.

The subject of medical education has had so much written about it of late years there is little more to say. It is plain that the preliminary education of medical students is sadly neglected, and that very many persons secure the title of M.D. who have even less medical than general knowledge. The fault is not so much with the colleges as with the communities that allow such titles to remain unchallenged.

There are in this country medical colleges, having as competent instructors, as abundant clinical advantages, and as zealous students as any in the world. But through the heedless and unnecessary multiplication of medical colleges everywhere, and the rivalry thus engendered, we know that very many totally incompetent persons are thrust upon the country bearing diplomas, which, according to the custom of our times, license them to at once experiment upon the people.

Some check should be found for this gross abuse of the high privilege of granting diplomas.

In the opinion of your committee this can best be done by the selection in each state of a properly organized and well paid board of medical examiners, whose duty it shall be to examine carefully every person claiming the right to practice medicine, whether a holding diploma or not. In this way, not only will the ignorant pretender be exposed; but the medical college which has hastily, or venially, or through any improper motive granted a diploma to an unqualified person, will be brought to a realizing sense of its responsibility.

PERITONEAL HYPERPLASIA.

E. PHILLIPS, M.D.

Before reporting the following case of peritoneal hyperplasia, I ask your indulgence a few moments in reviewing its pathological relations to tubercular peritonitis. By hyperplasia we mean an increase of the number of cells or elements of a part, with an increase of new tissue resembling the original structure. Prof. T. G. Thomas, who has given the profession so much valuable information on uterine hyperplasia, contends that the cellular tissue which binds together the fibre cells and nuclei, take on cell action, resulting in the proliferation of the original cells, and the formation of new connective tissue, which leaves the uterine walls very much enlarged and the endometrium hyperæmic with a tendency to uterine fungosities. Lawson Tait also reports a case of fibrous hyperplasia of the ovaries. If we have those formative changes taking place in the uterus and ovaries, why not in the peritoneum? The peritoneum is a serous membrane made up of three layers. From within outward we have the pavement epithelium, basement membrane nearly structureless, and the connective or areolar tissue which contains the blood vessels and nerves. By peritoneal hyperplasia we mean a proliferation of the endothelium basement membrane and the areolar tissue with the formation of new tissue resembling the normal. With this formative change taking place, we can but have the same pathological changes taking place that we have in the uterus and ovaries. The epithelial cells of the peritoneum will proliferate and become prominent and roughened, but to a less extent than the columnar cells of the mucous membrane of the uterus.

In tubercular peritonitis we would expect to find the peritoneum studded over with little greyish transluscent nodules, non-vascular, about the size of millet seed, either isolated or grouped together in irregular masses, not invading the entire serous structure. While in hyperplasia we anticipate a general change of structure, both by the proliferation of cells and the formation of new tissue. In studying the causes of the two forms of disease we find that in tubercular peritonitis we admit but one predisposing cause, and that is heredity. While in peritoneal hyperplasia the cause is surrounded with as great an unknown mystery as that of typhoid fever and epithelioma.

Prof. Thomas, in giving the exciting causes of areolar hyperplasia, emphasizes obstructed involution, passive congestion and formative irritation under the predisposing causes, gives prolonged nervous depression, spanæmia and a constitutional tendency to scrofula and tubercle. Admitting that one-third of the women who have lacerated cervix, retroversion, or subinvolution, have areolar hyperplasia, we have the other two-thirds, who have been exposed to the same exciting causes without any indications of hyperplasia. May not many, if not all of those suffering from uterine or ovarian hyperplasia inherit a predisposition to that form of disease, and whenever the exciting causes are active, develop the disease? In peritoneal hyperplasia we may not be able to mention the exciting causes, but may we not in a portion if not in all cases of peritoneal hyperplasia, suggest that the predisposing causes (like some of those in uterine hyperplasia) are as specific and as disorganizing as that of scirrhus, tuberculosis, or asthmatic tendencies.

Miss Susan B., age 22 years, native of Norway, came to this country two years since. April 10th was taken to St. Barnabas' Hospital, and gave the following history: Six weeks before her admittance her friends called her

attention to an enlargement of her abdomen, insinuating that she was pregnant. At this date the girl was sick and unable to work. She remained an invalid until she came to the hospital, a period of three weeks. When admitted she was free from fever, but seemed to be suffering more from inanition than from any form of acute disease; very weak, scarcely able to sit up. At the expiration of three weeks, with a generous diet of milk and beef tea with quinine and strychnine, she began to improve and sit up a few hours each day. Up to this time no abdominal examination had been made. During all this period of invalidism her menstrual periods were regular and free from pain. Physical examination now being made we found a rotund abdomen large enough for an eight month's pregnancy, the enlargement extending above the umbilicus filling the left iliac region and extending beyond the median line to the right. It was dull on percussion everywhere except along the right iliac region and over the epigastric region. In every position of the body the percussion sound remained dull to the left of the median line. Fluctuation was indistinct by palpation. The uterus was anteverted, two and one-half inches in length and in a healthy condition. With a large hypodermic syringe we removed an ounce of the fluid, which was straw-colored and slightly gelatinous when rubbed between the fingers. Drs. R. J. Hill and W. J. Byrnes examined the fluid microscopically, and found fat and epithelial cells, and also the Drysdale granule. Drs. J.W. Murray and Archibald Fairbairn each examined the patient, Dr. M. deciding in favor of a cyst, while Dr. F. was undecided.

With the history, although vague, and the weight of evidence in favor of a cyst, and the rapid distension of the abdomen, we decided to make an exploratory incision on the morning of May 14th. Drs. Murray, Fairbairn, Bell, Damm, Hill and Byrnes were invited to assist in the operation. The patient being anæsthetized and placed

in the dorsal position with her feet resting in a chair, an incision three and one half inches was made midway between the umbilicus and pubes. In dividing the skin and superficial fascia we found nothing abnormal; passing through the linea alba and transversalis fascia we encountered a large amount of adipose tissue, so much so, that it was with great difficulty that we recognized the peritoneum. The peritoneum being reached, a trocar was introduced and nearly eight quarts of straw-colored fluid were evacuated. By enlarging the opening and passing in the finger, we not only learned that the fluid was peritoneal, but the cavity was rough and studded over with small papillary growths, to the touch resembling an old chronic case of granular vaginitis. The intestines were crowded to the left and above in the region of the liver, and held in that position by adhesions. The peritoneal covering of the intestines was thickened and covered with the same papillary growths, which covered over the entire peritoneal surface, excepting the cœcum, which felt normal.

Extending midway between the pubis and umbilicus upwards and to the left towards the liver was a growth firmly attached to the peritoneal surface in the umbilical region and to the transverse colon. The growth seemed quite firm, simulating muscular tissue, and at least two inches in thickness. From its attachments and the absence of the omentum, we decided that this was omental in a changed form. The entire peritoneal surface was thickened so that it would measure at least one-tenth to one-sixth of an inch in thickness with a great surplus of adipose tissue closely connected with it. The cut surface was purple in color, resembling the color of the growth. Extending from the mass to the left inguinal region was a strip of tissue three-fourths of an inch in diameter resembling the original growth in color and firmness.

The above pathological conditions being made known

to us, we thoroughly cleansed the peritoneal cavity by syringing it with melted ice water at blood heat, impregnated with carbolic acid. The incision was closed by passing silk ligatures well back from the edge of the incision, including the integument and peritoneum. A double flow drainage was inserted in the lower angle of the wound. Antiseptic dressings and a bandage were applied, and the patient removed to her bed. She rallied without any unfavorable symptoms excepting a very high degree of temperature which followed in a few hours after the operation.

To condense this report I will give the daily temperature from the day of the operation until her death which took place June 3d.

			Temp.	Pulse.		Temp.
May	14,	6 P. M.	104	120		
"	15,	6 A.M.	102	120	6 P.M.	103
"	16,	"	100	104	"	100
"	17,	"	100	104	"	103
"	18,	"	100	108	"	100
"	19,	"	100	102	"	99
"	20,	"	100	96	"	100
"	21,	"	99	96	"	98
"	22,	"	100	94	"	99
"	23,	"	100	94	"	99
"	24,	"	102	112	"	101
"	25,	"	100	100	"	99
"	26,	"	102	102	"	102
"	27,	"	100	102	"	100
"	28,	"	100	94	"	100
"	29,	"	102	112	"	101
"	30,	"	100	96	"	100
"	31,	"	99	108	"	99
June	1,	"	101	112	"	100
"	2,	"	100	108	"	102
"	3,	"	101	112		

From the morning of the 15th until the 24th the patient was cheerful and took milk quite freely. No tympanites and but a very little discharge from the drainage tube. The sixth day following the operation the discharge began to increase and grew quite offensive; but the patient continued cheerful and took her milk.

On the morning of the 24th the patient began to complain of dizziness, anorexia, dry tongue, great heat and rapid pulse. In a few hours she began to vomit, and continued to vomit whenever she took nourishment for forty-eight hours. The abdomen now for the first time began to show evidences of tympanites and continued to enlarge for seventy-two hours, when it gradually began to subside, and in forty-eight hours returned to its normal size. The patient began to take milk again and the symptoms looked more favorable, notwithstanding the tongue remained dry and the discharge from the tube increased in quantity and grew more offensive.

On the evening of the sixteenth day after the operation the right parotid gland began to be painful and enlarge, and soon resembled a typical case of mumps. By applying soothing applications and poultices the pain and swelling entirely subsided in forty-eight hours. At this stage in the case, the morning of the 19th day, the left gland took on a violent inflammatory action and became very much swollen, and remained so until the patient died.

The three last days that the patient lived the discharge from the abdominal cavity grew less, but still the putrescent odor remained until the last. The incision united by the first intention, and the stitches were removed on the ninth day. The pulse remained strong until twenty-four hours before death, when it grew weak and frequent, and remained in that condition until death closed the scene on the afternoon of the twenty-first day after the operation.

A portion of the diseased growth was examined micro-

scopically by Drs. Hill and Byrnes, and found to resemble connective and fibrous tissue without any indications of tubercular or malignant cells.

Having reserved the treatment of the case until after its history, I will now give a short synopsis of the treatment. The patient was given brandy and morphine gr. ¼ half an hour before the operation. Soon after the operation the same amount of morphine was repeated without the brandy. In four hours bi-sulphate quinine gr. ii., morphine gr. ¼, with two ounces of beef essence was given by enema, and repeated every fourth hour as long as the patient lived, with the exception of forty-eight hours that she suffered with a diarrhœa. This seemed to be all the medication required for the first ten days, or until the symptoms of septicæmia were manifest, when brandy was freely given.

As we have already stated, the double drainage tube was left in the lower angle of the wound; through this for the first six days one pint of tepid ice water with ten grains of carbolic acid was injected into the abdominal cavity every six hours. On the seventh day the discharge was offensive and the injections were used every fourth hour as long as the patient lived. Had it not been for the drainage tube the patient would have died from septic poison before the tenth day. Two or three times after syringing, the fever fell half a degree and the patient always expressed herself feeling better, and was anxious at any time to have the cavity syringed.

The Pathology and Surgical Treatment of Traumatic Tetanus.

BY R. O. BEARD, M. D.

The nervous system has, so far, lain almost outside the pale of practical surgery, and under few conditions of disease of either nerve-centers or peripheral fibres has its theoretical application been contemplated. We put the knife to the muscle and the saw to the bone, and trust to nature for the repair of these structures; but we hesitate to touch so much as a nerve-trunk, in which the restitutive power of nature is as active as in other tissues.

Our failure to understand much of the pathology of nervous disease and to grasp the possibility of its relief, is the cause of our reluctance to interfere even in those cases in which interference is most clearly justified. It may be that the field of actual opportunity is small, but I venture to refer to the pathology of a single one of these nerve-lesions for the sake of the indications it offers for radical treatment.

In view of the insignificance of its cause, the frequency of its occurrence, and the disastrous nature of its results, one of the gravest complications of surgical conditions is *traumatic tetanus*. Its gravity has been vastly increased by the obscurity which has enveloped the pathology of the disease, and by the consequent uncertainty which has attended all attempts at treatment. Medical measures have been altogether experimental and their action, generally speaking, unsatisfactory. Surgical measures have fallen into partial disrepute because of the supposed lack of indications for their exercise. Until some new light

can be thrown upon the pathology of tetanus, all hopes of success in treatment must be exceedingly limited. A summary of the results of past investigation with the addition of some corroborative testimony deduced from two cases that have come under my own observation, I shall make the basis for some suggestions which may tend toward the direction from which I think this light may come.

Commonly this disease has been ranked among exclusively spinal lesions, and hence students of its pathology have directed their attention almost exclusively to the spinal cord. Demme, Wedl, Curling, Rokitansky, Michaud, Lockhart Clarke, Allbutt, Aitken, Dickinson, Fox, Hammond and others, have described appearances in the cord which are consequentially related to a more or less aggravated hyperæmia, viz.: redness and turgidity of vessels in the gray matter, exudation and increase of connective tissue elements. It must be noted that these appearances were not, by any means, constant, and that, when present, they were confined to small regions of the cord. In direct proportion as symptoms of tetanus have been severe and rapidly developed, and as the results have been quickly fatal, these appearances have been conspicuously absent. Billroth, in fact, has *never* found sufficient abnormality in the cord to justfy the suggestion of a spinal lesion. These facts would seem to indicate that, when present, such appearances bear but a secondary or even tertiary relation to the cause.

Nevertheless, these other observers have given it as their opinion that the spinal system is the seat of the disease; or as Hammond puts it, that tetanus "consists in a morbid exaltation of the function of the spinal cord as a nerve center." Aside from the theoretical doubtfulness of this statement, the question suggests itself, whether this view accords with the symptomatic indications in the case. Would the "morbid exaltation" of spinal function manifest

itself primarily in the contortion of a group of facial and cervical muscles which are supplied by cranial nerves? And would the muscles of the trunk and extremities, which are directly supplied by nerves of spinal origin, be the last affected or be totally exempt were the cord the primary centric seat of the disease? The symptoms of poisoning by strychnia, by their very differential character, present a negative reply to these questions. Acting as a stimulus directly upon the cord centers, the extremities, which in tetanus are almost invariably exempt, are immediately convulsed by strychnia, and the contraction of facial and cervical muscles does not occur, if at all, until late in the course of the attack. Therein lies the essential difference between the tetanoid convulsions of strychnia poisoning and the tetanic spasms of tetanus.

Notwithstanding these facts, the symptoms of true tetanus are undoubtedly the direct result of some centric nervous disturbance, and their gravity would lead us to expect that the lesion would be apparent. Accordingly we find that a few later investigators have pushed their inquiries beyond the condition of the cord with significant success.

Wunderlich was, I think, the first to note the fact that the medulla oblongata was deeply injected. Later, Dr. Joseph Ross, after noting the slighter and variable implication of the cord, reports that he found the inferior portion of the nuclei of the hypoglossal pneumogastric, spinal accessory and glosso-pharyngeal, and also the root of the fifth nerve, hyperæmic and largely infiltrated with leucocytes, and describes the evidences of nerve tissue destruction. Bartholow and a few others have incidentally noticed this implication of the medulla, but have failed to draw any important inference therefrom. In one of the two cases coming under my own observation a fatal result gave the opportunity for a *post mortem*. An extreme and precipitate form of the disease had left no abnormality

discernable in the cord save a slight superficial redness in its lumbar enlargement. Extensive infiltration and granular degeneration were found however in the lateral and posterior portions of the medulla, and in the floor of the fourth ventricle.

Regarding these and other observations as confirmatory of Dr. Ross's more minute investigations, I am inclined to think that such lesions, if carefully sought, may be found in all cases of tetanus. Moreover, they are largely explanatory of the usual train of symptoms. The muscles which are first and principally affected, viz., the diaphragm, the sterno-mastoids, the trapezii, the masseters, internal pterygoids and other facial and cervical muscles in order, are directly supplied by the trigeminus, facial, glosso-pharyngeal, pneumogastric, spinal accessory and hypoglossal, all of which have their origin in the medulla or in the floor of the fourth ventricle, or by the phrenic and other higher cervical nerves which are in direct communication with the vagus and spinal accessory. The peculiar embarrassment of respiration, and the appearance of sugar and albumen in the urine of many tetanic patients, alike indicate the disturbance of the medullary centers which control these phenomena. The hypersensitiveness of the auditory apparatus, and the remarkable excitation of the external recti muscles of the eyes observed in tetanus both point to the implication of the auditory and sixth nerve origins which lie in close anatomical relationship with those of the above-mentioned nerves in these medullary centers.

But granting the fact of this lesion in the medulla, the first cause of tetanus is still to seek. This centric disturbance must have an eccentric origin and it is this peripheral element in this case which, though recognized, has been most persistently ignored.

Airlong, Larry and Tripier are among the few who have

pointed out that in traumatic tetanus the nerves at the seat of the injury always give evidence of an ascending disease. Erichsen also asserts that careful dissection will always reveal degeneration of the nerve. He cites several cases of tetanus in which he has demonstrated the fact; one in which a dorsal branch of a spinal nerve was found in a wound of the back, lying bare, reddened and with ecchymosed sheath; another, an injury to the wrist in which the external cutaneous nerve was similarly involved; and a third, a wound in the sole of the foot, in which sloughy irritation was followed up the course of the musculo-cutaneous nerve for some distance. Apropos of this, in the fatal case in my own experience to which I have already alluded, in which both feet were crushed and Chopart's operation was performed, and was followed two days later by tetanus, the *post mortem* examination told the same story. The external and internal plantar nerves and the posterior tibial, for two or three inches above its bifurcation, were dissected out in each limb. In one the nerves were affected in some three inches of their course; in the other to a point beyond the limits of the dissection. From the appearance of the nerve-fibers in this instance I should suggest that the affection was something more than a simple neuritis, which, as I understand it, involves only the nerve sheath, and that the whole substance of the nerve, including the axis-cylinder, had sustained injury.

Dr. Brower, the noted neurologist of Chicago, who formerly inclined, I think, to the idea of the septicemic origin of tetanus, has, I see, recently adopted the view I have indicated concerning its seat in the medulla, and is the first, so far as I am aware, to refer significantly to the close connection existing between the medullary centers and nerve origins and the sensory end organs of the peripheral nerves.

The rationale of the inception and transference of this peripheral irritation to its centric seat presents no special

difficulty. Considering the slightness of the injury which is often sufficient to initiate tetanic irritation, and the fact of its frequent absence from severer wounds, it is evident that some peculiar internal or external condition must be necessary to its development. Remembering its more constant occurrence and more rapid onset in tropical latitudes and amid insanitary surroundings, we should consider the influence of environment. The fact that not every nerve so injured, under the worst of conditions, is subject to tetanus, would infer an anatomical element in its causation.

It is probable that whenever this peripheral disease, produced either by traumatism or idiopathic impressions, manifests itself in excessive nerve-action upon spinal centers or cells *lying in those pyramidal tracts which are in direct connection with the medulla and the cerebellum*, the centric lesion ensues and tetanic symptoms follow. Hence I suggest that the excessive reflex action of tetanus has its seat in the vitiated centres of the medulla rather than of the cord, and that this vitiation results from peripheral irritation alone. The slight evidences of hyperæmia of sections of the cord which have been noted in prolonged cases, indicate that it is probably occasioned by direct communication from the medulla to subsidiary centers of the cord. In rapidly fatal cases, in which spinal lesions are uniformly absent, the irritation is probabiy so great that the organism is quickly overwhelmed by excessive explosions of reflex energy before sufficient time has elapsed for the development of these tertiary affects.

In view of this hypothesis, which seems to be supported by all the observed facts of tetanus, I submit the wisdom of the partially abandoned method of abruptly cutting off the communication between the diseased nerve and the central system. In view of the fact that in every recorded instance of its practice speedy cure or immediate relief has been obtained, it seems strange that surgical interference

has not more urgently commended itself to the profession. In an injury to the sole of the foot, followed by tetanus, Murray promptly divided the posterior tibial nerve and arrested the disease. Larrey cut the supraorbital in a case of facial injury, with the best results; and he also resected nerves or amputated limbs for the purpose in several cases successfully. Langenbeck dissipated tetanic symptoms in three instances by the removal of the cause. Lister made and recommended an inverted Λ-shaped incision down to the bone, and Erichsen endorses both methods of procedure. In the Cook County Hospital at Chicago, two years ago, Dr. E. W. Lee cut down to and stretched the anterior crural and the sciatic in a case of amputation at the upper third of the leg, followed by tetanus, with resulting relief and speedy cure. In a case of amputation at the wrist with tetanus following, I witnessed the division of the anterior interosseous with immediate subsidence of spasms and speedy diasappearance of all evidences of tetanus.

The risk of disæthesia, a doubtful one in any case, cannot be of sufficient weight to counterbalance the indication for surgical interference. Seemingly the only essentials of its success are promptness of action and the ordinary antiseptic precautions. In the case of nerve-stretching the results have been less certain and in a measure dependent upon its practice almost to the point of destroying function. The markedly peculiar character of the initial symptoms of tetanus and the simplicity of its differential diagnosis, afford an ample opportunity for action upon the part of the surgeon with the promise of the best results.

NECROLOGY.

During the year just past four of the active and one of the honorary members of this Society have died.

William H. Byford, jr., M.D., died at Minneapolis, in October, 1883.

Jasper E. Cheney, M.D., died at Brainerd, February 10th, 1884.

Geo. A. Lamb, M.D., died at Benton Harbor, March 1st, 1883.

Jacob H. Stewart, M.D., died at St. Paul, Aug. 25th, 1884.

Samuel White Thayer, M.D., LL.D., died at Burlington, Vt., November 14th, 1883.

WILLIAM H. BYFORD, JR.

Was born Jan. 21st, 1850, at Mount Vernon, Indiana. He was the son of Prof. Wm. Byford, of Chicago, Ill., who removed to that city in the fall of 1857. Here his son attended school until his fourteenth year, when he entered the primary department of Racine College, and at the end of two years went to Berlin, Prussia, to complete his education. He then traveled through Europe, returned home to study law, and was admitted to the practice of law in the courts of Illinois in 1870. A series of pulmonary hemorrhages compelled him to give up his profession and travel for his health, which became so nearly restored while living in Denver, Colorado, that he studied medicine there for a year with Dr. Denison, and then entered the Chicago Medical College, where he graduated in the spring of 1878. His pulmonary trouble again beginning

to develop, he decided to remove to Minnesota, hoping for beneficial effects from its dryer and more invigorating climate. He first went to Faribault where he won the esteem and confidence of all, but soon found himself unable to endure the great exposure and irregularities attendant upon active practice in a small town, and in October, 1881, removed to Minneapolis. There he took a prominent position in the profession, accepted the Chair of Physical Diagnosis in the Minnesota College and inspired the highest confidence in his professional ability. He was a member of the Society of Physicians and Surgeons of Minneapolis, and of the State Medical Society. In the death of this able and earnest man, not only the medical profession but the community has sustained a great loss.

Jasper E. Cheney

Was born in the State of Pennsylvania, Dec. 5th, 1847. In 1863, when only sixteen years of age, he enlisted in the Union Army, was soon made the hospital steward of his regiment, and then assistant surgeon until the close of the war, when he entered the University of Pennsylvania in Philadelphia. He graduated in arts and medicine from this university, having also previously graduated in medicine from the Georgetown College. He was for several years Demonstrator of Anatomy and Lecturer on Microscopy in the Medical School at Washington, D. C. He married in Pennsylvania a young aud accomplished lady, who died about a year ago of pulmonary consumption, the tendency to this disease, both in himself and his wife, having been the cause of his removal to this State about two years since. His own death was caused by an attack of acute congestion of the lungs, brought on by the exposure incident to a ten-mile ride in mid-winter, which he had taken three days before his death, in answer to the call of a very poor man.

Thus from boyhood up to the very close of his life we find him responsive to duty's call. No man stood higher in the community in which he lived, and in the medical profession he achieved an enviable reputation, and was one of its most prominent members.

Geo. Allan Lamb, M.D.,

Of Minneapolis, died at Benton Harbor, Mich., March 1, 1883.

Geo. Allan Lamb was born at Ashtabula, Ohio, July 1, 1837. During his boyhood his father's family removed to Greenbush, Sheboygan Co., Wis. He studied medicine in the office of Dr. E. L. Griffin, of Fond du Lac, and graduated from Rush Medical College in 1861. After practicing a year or more he was commissioned as assistant surgeon of the 40th Wisconsin Regiment, and served the period of enlistment, 100 days. He then came to Green Bay and commenced the practice of medicine in 1864. On Sept. 26, 1866, he was married to Miss May Eastman, of Benton Harbor, Mich. He had a good practice in Green Bay, but in 1873 removed to Minneapolis, in which city he soon acquired a large practice, and where he resided until near the time of his death, when, in the hope of restoring his health, he retired to Benton Harbor, Mich., where he died at the residence of his wife's father, Col. H. E. Eastman. The cause of death was Bright's disease, terminating in pneumonia. His remains were buried in Woodlawn cemetery, Green Bay, attended by the Masonic fraternity and the medical profession of the city.

Dr. Lamb was a physician greatly beloved, a man of intellectual ability and of moral worth. He was called in the published "Annals" of his regiment the "Good Physician."

The medical profession of Benton Harbor, as well as

the members of the Masonic lodge at that place, were most unremitting in their labors to make him comfortable in his last illness.

His widow and two children mourn the loss of a beloved husband and father, and the medical profession of our State that of an honored member.

JACOB H. STEWART, M.D.

Dr. Stewart was born in Connecticut in January, 1829. Having spent three years at Yale College, he was compelled to forego graduation because of impaired health, but with its recovery, in 1849, he began the study of medicine at the University of New York, at which he took his degree in 1851.

For a time he was associated with his father in practice at Peekskill, N. Y., but in 1855 came to St. Paul, having decided to make the West his home. From that time until his death, Aug. 25, 1884, his life history has been a not unimportant part of the history of the city in which he lived. The bestowal upon him of the offices of Mayor, Postmaster, U. S. Representative and Surveyor General, testified to the confidence and esteem with which he was regarded by the community, while the manner in which these trusts were discharged bore witness to the fitness of his selection. But while much might be said in praise of Dr. Stewart as a citizen, it is as a physician that reference must be made to him in this connection.

An active and interested member of the State Medical Society, and during the year 1875 to 1876, its President, he was widely known as one of the foremost physicians of Minnesota. Without attempting a biographical sketch of Dr. Stewart, some mention, however brief, should be made of certain traits which none who knew him will fail to recognize, and which may well serve as an example for the guidance and imitation of our profession. Were all

physicians like him, the code of ethics as such, would soon become a mere literary curiosity. Scrupulously loyal to his brethren, none of them ever entertained the faintest suspicion that by look or word or manner would Dr. Stewart infringe upon their rights, or do aught save as he himself would be dealt with by them. If he were called to the patient of another in the absence of the regular attendant, no misgivings were felt that something unpleasant might happen; but on the contrary, upon his resuming his charge of the case, the attending physician was quite likly to find that he was more firmly established in the good opinion of the family by reason of Dr. Stewart's visit. This loyalty, too, was strikingly displayed in consultations, especially when he happened to be an advisor with some younger and less well known man; in such cases he always endeavored to impress upon those most interested that the case was wisely managed, and that its treatment had been such as to justify the largest confidence. Many a beginner, and some who were not beginners, have felt their hands strengthened and their courage revived as a result of such consultations, even if no new measure were adopted or the virtues of no new drug suggested.

Much of this happy faculty was due to Dr. Stewart's peculiarly cheery manner; always bright and pleasant, he was sure to carry sunshine into the sick-room, where his presence often proved almost as effectual a remedy as his more formal prescriptions.

His kindness to the poor was proverbial; not only by gratuitous attendance, but by substantial and timely gifts he won their hearts, so that in many a humble home the news of his death carried with it a sense of personal loss and a deep and heartfelt sorrow.

Dr. Stewart was a physician by nature, not less than by education and training. No one who observed him failed to remark the rapidity with which he arrived at a conclu-

sion in cases of illness; while others removed, one by one, the wrappings of an obscure case, and strove to make a diagnosis by exclusion, he would go at once to the bottom of the subject and announce his opinion; and he was rarely in error. Some were disposed to call the process happy guessing; it was in reality intuition,—the faculty of insight without a train of reasoning.

Pages rather than paragraphs might be filled with the narration of incidents illustrative of Dr. Stewart's character, such as would convey a better idea of the man and the physician than any mere description; but restricted space rather than inclination forbids more than this imperfect notice.

Our Society has lost a deservedly honored member, and the community one of its most useful citizens.

Samuel White Thayer,

An honorary member of this Society, born at Namtree, Vt., May 21, 1817, was the eldest son of Dr. Samuel Wite Thayer and Ruth Packard Thayer. In 1832 his parents removed to Thetford, Vt., when he fitted for college at the Thetford Academy, and commenced the study of medicine under his father's instruction in 1835, taking his first course of lectures at Dartmouth. He graduated from the Vermont Medical College in 1838, filling the office of demonstrator of anatomy in that college from 1837 to 1841. He was engaged in the practice of medicine and surgery at Northfield, Vermont, from 1840 until 1854, when he removed to Burlington, Vermont, where he filled the office of professor of surgery in the medical department of the University of Vermont, to sustain which he was for years untiring in his efforts. At the beginning of our civil war he was appointed chairman of the State Board of Medical Examiners, and in 1864 was appointed Surgeon General of the State of Vermont. In 1866 he received an honorary de-

gree of A. M. from Dartmouth College, and in 1877, the honorary degree of LL.D. from the University of Vermont. While amputating a gangrenous leg in 1867 he scratched his hand; septicæmia resulted which threatened his life at the time, and from which he never fully recovered. He was a great traveler, both in his own and foreign lands; his last long journey being to St. Paul in 1882, as delegate to the American Medical Association, extending his journey to Montana and the Yellowstone Park. He returned to his home in Burlington, Vt., and was soon after attacked with gangrene of the foot, which caused his death. He was the leading surgeon of the State, his operations including nearly all of the most difficult ones which have ever been performed in Vermont. As a general practitioner he was a man of good judgment, of rare good sense. He was remarkably unselfish, and generous to a fault. He died universally lamented, all classes mourning him as a dear personal friend. At his burial the entire city did him reverence,—flags at half-mast, all places of business closed, all the bells of the city tolled. He was married Jan. 6, 1841, to Sarah Louisa, daughter of the late John A. Pratt, of Windsor, who, with one son, Dr. Charles P. Thayer, survives him.

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1881–1882.
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1884–1885.

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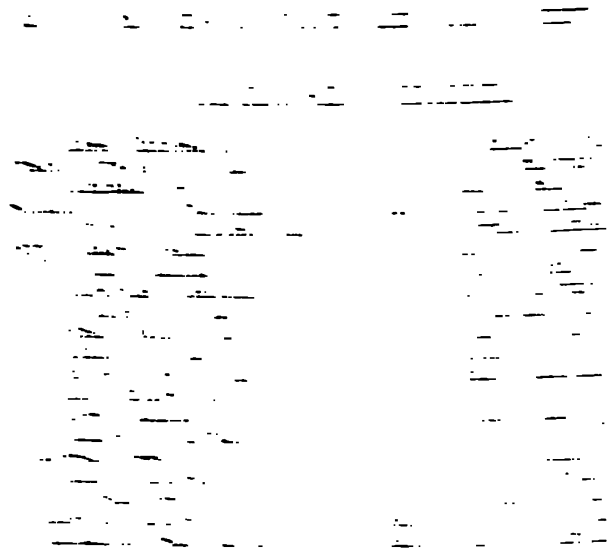

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